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American Modernized 203.2-mm Self-Propelled Howitzer M110A2
 American Destroyer DD963 "Spruance"
 Norwegian Missile Patrol Boat P967 "Skudd"
 Italian Air Force Fighter-Bomber G.914

Articles by Soviet authors and the chronicle were prepared from foreign press sources.

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WEAPONRY: SOVIET VIEWS ON NEW CONCEPT

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 11, Nov 79 signed to press 6 Oct 79 pp 10-14

[Article by Maj Gen-Engr (Res) N. Maksimov, candidate of technical sciences: "The Concept 'Destruction with the First Round'"]

[Text] U.S. and NATO aggressive circles, hiding behind the self-created myth of a "Soviet threat," continue to step up the arms race to achieve military superiority over the socialist countries. In this desire at the contemporary stage they are placing great attention on qualitative improvements in weaponry through use of the latest scientific and technical achievements. One vital trend in this area is tangible improvement in the accuracy of target destruction by all weapons systems.

The concept (or principle) of "destruction with the first round," as it is referred to overseas, whereby development of new weapons types includes the necessity for them to destroy the target with one round, has been developed in recent years in the U.S.A. This requirement primarily applies to conventional weapons, even though much is being done in the U.S.A. to also improve the firing accuracy of nuclear weapons, including strategic weapons.

Firing accuracy improvement envisages broad use of radioelectronic devices and other achievements of science and technology, which should make weapons employment less dependent on humans. Western specialists see in this a certain mistrust of the moral state and psychological preparation of the personnel in the NATO armed forces.

Many American military specialists consider that widespread introduction of weapons capable of destroying a target with the first shot will lead to major changes in tactics.

The basis for the above concept lies in creation of tactical and operational-tactical guided weapons, which in actual combat can insure a direct hit on a target with a probability of at least 0.5. They are referred to in general in the U.S.A. as PGM--precision guided munitions.

It is known that, right up until the end of World War II, given all improvements in weapons, the accent remained on firing or conducting fire against areas. The field artillery rolling barrage or massed bomb strikes from the air will serve as characteristic examples of the employment of these weapon qualities. Soon after the war many specialists thought that guided missiles would make it possible practically to ensure destruction of point targets. As a result, so-called "push-button war" received broad dissemination. However, in reality results were much more modest. Lack of refinement in the early weapons models and systems, dependence on weather, visibility, the moral and psychological state of maintenance personnel, the reduction in accuracy accompanying an increase in range, and other deficiencies resulted in their actual combat effectiveness often being much less than estimated or even obtained after proving ground tests.

Thus, Vietnam experience demonstrated the low effectiveness of the first modified Bullpup air-to-ground guided missiles. They were guided by a remote control system using the "three dots" method in which the missile during the entire guided phase of the flight must be maintained on a straight line passing through the sight and the ground-based target, while the aircraft remains on the attack run, closing on the target. When employed against targets with good air defense cover, American aviation incurred large losses, while missile accuracy turned out to be very low due to pilots prematurely ceasing to guide them.

Guided aerial bombs are another example. Lack of refinement of the first models led to their development being halted in all Western countries, to be reestablished only 20 years later along with a new technical capability.

However, other facts appeared in the foreign press. During the aggressive U.S. war in Vietnam, the TOW antitank guided missile [ATGM] was sufficiently effective, especially when employed from helicopters. In the late 1960's American specialists built new guided (correctable) aerial bombs with laser and TV guidance systems and the bombing circular error probability (CEP) was about 3 meters. The number 150, which characterizes the bombing accuracy of conventional unguided bombs from a B-52, was used in the Western press for comparison. U.S. military experts after analyzing the results of the Arab-Israeli wars, gave high marks to the Maverick air-to-ground guided missile.

Experience in developing and employing guided missiles, the latest achievements in the field of microelectronics and guidance systems, in production technology, and appearance of new materials made possible creation just prior to the 1970's of new PGM models which made it possible to accomplish the mission of destroying point targets sufficiently effectively. At present, according to the foreign press, all services in the U.S. armed forces possess a relatively large arsenal of such weapons capable of destroying varied targets, not only those within the limits of line of sight, but also those outside these limits. Weapon accuracy here is determined depending upon the type targets it is intended to destroy. For example, antitank rounds, whose typical target is a main battle tank viewed side on, have a CEP of 1.5 meters, while that of an antiship missile is 6-8 meters.

Several different PGM types were demonstrated for specialists and journalists in December 1978 at the White Sands Missile Range. They included 127, 155, and 202.3 millimeter correctable artillery shells, TOW and Hellfire ATGM, the Stinger SAM, the HARM, the Harpoon antiship system, two Maverick air-to-ground missile modifications with TV and IR guidance systems, Walleye guided aerial bombs, and the GBU-10, -12, and -15. The weapons demonstration was accompanied by actual firing, during which all shells, bombs, and missiles, as emphasized in the foreign press, destroyed the corresponding targets.

Among present PGM models foreign specialists look upon the U.S.-developed XM712 Copperhead 155mm guided shell with its semiactive laser seeker in the final stage of the trajectory as one of the most interesting. At the demonstration two rounds were fired at M47 tanks--one stationary and one moving perpendicular to the sight line. These two shells had an improved casing configuration. Overall, 16 of 18 shells were successful, taking into account tests previously conducted. This shell went into series production in 1979 and large sums have been allocated for their purchase.

The U.S. command plans to employ the Copperhead against armored targets, primarily enemy tanks, from indirect fire positions. Targets beyond line of sight can also be destroyed by other artillery shells, Harpoon antiship guided missiles, Tomahawk cruise missiles now under development (range approximately 550 kilometers), and other future PGM models and systems.

As foreign specialists put it, if the enemy does not have similar weapons, then U.S. and NATO troops armed with the above-mentioned systems will have great advantages. For example, thanks to the Copperhead shell, all T/O 155mm guns are capable (with a probability of 50% and more) of destroying point targets from indirect fire positions long before the enemy can do so.

However, as underscored in the foreign press, implementation of these advantages is tied to solution of complex problems. Thus, the Copperhead shell is guided by a semiactive laser seeker system and, consequently, for trajectory changes to be made, the target must be designated by a laser, which can be located aboard a helicopter, aircraft, remotely piloted vehicle [RPV], or in a ground-based observation point. The shell is not guided over its entire trajectory, but only in the final stages of flight, so the seeker must be able to lock on as the round approaches. These two moments presuppose the requirement to create new reconnaissance, target designation, and control systems capable of ensuring effective Copperhead employment.

Reconnaissance subunits [podrazdeleniye] must provide information on all targets advisable for destruction using such shells. Designator resources obtain target designation for allocation and laser illumination of an assigned target until the moment the target is destroyed. Target designation data also are passed to the 155mm howitzer battery command post [CP]. The fire of a Copperhead shell must be aimed, against an assigned target, since the guidance system does not guide in the generally-accepted sense, but only corrects the trajectory and eliminates firing errors in the final stage.

The guidance principle itself presupposes firm requirements primarily for reconnaissance resources which produce the requisite highly accurate real-time data on target location. Extremely accurate determination of target location (its coordinates) is required in those instances when weapons without seekers are being employed.

Equally high accuracy is required when determining the location of a firing gun (launcher), regardless of where it is deployed (ground-based, shipborne, or aerial). An error in determining the coordinates of one's own fire position (location) equates in significance to an error in determining target location. This makes it necessary to supply the troops with qualitatively new topogeodetic and navigational systems. Foreign specialists note that, given successful solution of such problems, employment effectiveness of several types of guided munitions, for instance conventional aerial bombs (aircraft being more accurate in reaching the launch point), will also improve.

The foreign press reported that extant ground-based and aerial reconnaissance systems and resources on an operational-tactical plane do not yet meet such demands. At present, work is underway to develop new radio-technical, radar, IR, heat-seeking, radiometric, and other reconnaissance systems and means.

The desire to exclude the human from the process of carrying out actions at the moment when the human might be exposed to enemy fire effects explains the wish to reduce dependency of the effectiveness of the weapon on the moral and psychological state of the personnel. In this connection, foreign specialists consider remotely piloted vehicles (DULA--RPV) as having the best perspectives as reconnaissance means for PGM. Properly equipped, an operator located in a relatively safe place in his own territory can control them. They propose that such RPV will be employed also for target designation, for example using a laser designator to illuminate a ground-based target. Plans are to supply RPV with equipment to transmit reconnaissance data to friendly control posts and artillery unit [chast'] CP in real time and in sufficient detail so the situation can be correctly evaluated and a substantiated decision made to destroy a specific target.

The most effective approach is to combine all reconnaissance, command and control, and target destruction problems into an integrated complex. The first such complex is under development in the U.S.A.

Supporting the "destruction with the first round" concept in conventional weapons development, the Pentagon and NATO do not rule out, but on the contrary, also are stepping up efforts in other directions. The final results of this concept are being evaluated by them on the general backdrop of weapons and combat equipment for use in wars where conventional means of destruction are employed. These proposals are being quite fully discussed in the foreign press. However, the conclusions are now being made that creation of new types of weapons developed in accordance with the "destruction with the first round" concept provides the bloc command several advantages. In the opinion of foreign specialists, troop combat capabilities and their ability to accomplish specific missions will improve and enemy losses in personnel and especially of equipment will increase. They consider that the experience from the last Arab-Israeli War

shows that, in the cruelist battles, weapons and combat equipment losses might be about one magnitude greater than in similar combat operations during World War II. Fire capabilities of combat groups employing the new weapons will increase. This may lead to changes in unit and formation [soyedineniye] organization, as well as to greater independence granted to small subunits. Troops will place greater attention on camouflage and covertness in concentrating personnel and combat equipment in the sector of the main blow and when carrying out other forms of maneuver.

They consider that supplying precision munitions to the troops can mean achievement of economic benefits, too. This is evident from a simple comparison of the cost of one round and of the target (a target usually costs more by a factor of 10 or even 100). As W. Perry, Under Secretary of Defense for Research and Engineering (NIOKR) emphasized, this circumstance forces one to reexamine views on such powerful weapons as tanks, since the bigger they are, the easier it is to destroy them.

American specialists think that equipping troops with PGM and with new reconnaissance and command and control resources is an objective process which, in their view, is underway in the armed forces of NATO and of their potential enemies. Therefore, the aforementioned consequences and advantages apply equally to both sides. It is only a question of who can more rapidly implement this concept and whose weapons and equipment will be better in quality and combat capability.

Such an approach by Western military circles to selection of the vital trends in weapons development in essence is an attempt to transfer efforts in creation of modern means for conducting the arms struggle into a new sphere, one in which the U.S.A. and NATO beforehand expect definite success.

All this shows that the deepening of political detente, the SALT II Treaty, and the other peaceful initiatives by the countries of the socialist commonwealth do not allow U.S. and NATO circles, the ring leaders of the West's military-industrial complex, any peace as they continue to seek new ways to further spur on the arms race. The troops of the USSR Armed Forces must vigilantly monitor the intrigues of these circles, realistically evaluate the full danger of the militaristic preparations underway in the North Atlantic bloc, and increase their military professionalism in order to reliably guarantee the security of the Soviet Union and of the entire socialist commonwealth.

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POLITICAL INDOCTRINATION: NATO METHODS DISCUSSED

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[Article by Capt 1st Rank T. Belashchenko: "Religion in the Ideological Processing of Servicemen from the NATO Countries"]

[Text] In spite of significant successes in the policy of detente, forces are actively at work in the imperialist countries to propell the world backwards, to the brink of the Cold War, they follow a course leading to financial preparations for new armed conflicts, they are relying on ideological sabotage against peace-loving peoples, on internal subversion against the countries of the socialist commonwealth, primarily the Soviet Union. Reactionary clerics, the church, and military chaplains in the armed forces of the U.S.A., FRG, Great Britain, and other NATO countries are found in the ranks of these enemies of peace and democracy.

The bourgeoisie always looked upon the reactionary clergy as one of the most reliable allies in the struggle against progressive forces. Today the church, just as before, occupies a very powerful place in bourgeois society, in all its institutions, including the armed forces.

The ruling circles and the command call upon it to assist in the political and moral-psychological processing of soldiers and sailors. This processing is aimed at infusing them with trust in the firmness and justice of bourgeois society's foundations and must serve imperialism in accomplishment of such missions as suppression of speech of the laboring masses and their country's national minorities and carrying out aggressive acts against the people of other states.

The actions of military chaplains in the armies of the imperialist countries are directed at the spiritual enslavement of servicemen, at reinforcing psychological stereotypes of bourgeois propaganda in their consciousness, and ensuring implicit obedience to commanders, to officers who, as military chaplains assert, "are supported by God's power and serve God's word."

Naturally, under today's conditions the church and military chaplains, forced to take into account the moods of the overwhelming majority of the Earth's population, strive to the greatest degree to tune themselves in to these moods. Already they cannot permit themselves, as before, to openly advocate "total nuclear war against the godless communists," they do not announce as was the case, let's say, in the 1950-1960's that "God placed in the hands of the Anglo-Saxon nations favorable to him an atomic sword in order to bring it down on the heads of enemies of Christ steeped in communism." However, none of this means that the reactionary clergy in the U.S.A. and other imperialist countries, just like all enemies of peace and detente, have abandoned their strategic goals--the struggle for world superiority, including through force of arms, that it has revived its dogmas and concepts, its anti-communist and anti-Soviet designs. On the contrary, the successes of the socialist countries, the victories of peace-loving peoples in the cause of detente and peaceful coexistence makes the reactionaries all the more bitter, makes their course more difficult, and impels them to reckless acts.

As already noted, militaristic propaganda is the foundation of the content of military-religious propaganda in the armies of the imperialist states, as in the overall ideological processing. Military chaplains use religious means to justify the aggressive policy of ruling circles, to convince people that the West's only enemies in the desire for peace and prosperity are the Soviet Union and other countries of the socialist commonwealth, which, in their words, are carrying out "a dangerous buildup in their military might so as to use this might to the detriment of Western countries and thereby create prerequisites for unconditional communization of all free countries and nations."

At no other time has anti-communist propaganda, including via religious means, been so strident as is the case now. Capitalism all the more clearly senses that its positions are deteriorating and being ruined, it strives somehow "to compensate for" this loss through a radical increase in the number of ideological diversions, subversive acts, and various adventures. All types of tricks, even the dirtiest, are used. "Nothing is considered too low or too vile, too dishonorable or too false if it only can to some degree be used against communism," the magazine LABOR MONTHLY wrote about the activities of English military chaplains.

Military clergymen instill in soldiers and sailors that the great opposition to socialism and capitalism, the forces of peace and the forces of war are something other than the consequence of social causes, of the struggle of the great ideals of "Marxism-Leninism" against a bourgeois ideology that has outlived its utility and terms it just "a clash of the God of blessed Western democracy against communist atheists," "the opposition of the Christian world and godless communists." Basing their position on similar affirmations, military chaplains appeal to personnel "to rally around faith and its institutions," "join the sacred crusade against the godless," and the main appeal- "in no way believe the communists."

Great significance in the content of military-religious propaganda is attached to the thesis that, under the contemporary conditions of the continual reinforcement of the ideological struggle, religion somehow is the last

bastion of the "free world," which protects it against communist ideology, against Marxist-Leninist theory and practice. "Our people," announced, for instance, one participant in the All-Army conference of the militaristic organization Crusade for Christ convened at Pentagon initiative, "are convinced that Christianity today is the single barrier and our only hope in the battle against communism." Speeches by other participants in this military-religious propaganda crowd widely advertised in the U.S.A. and other NATO countries contained many appeals to step up the battle against "the communist threat," assertions that Marxism-Leninism somehow is "absolutely unacceptable" for believers, that it is a "weapon of evil and infernal obsession" and therefore any means of fighting it are good.

Speeches by Maj Gen G. Hyatt, until recently U.S. Army Chief of Chaplains, to personnel at Fort Lewis (Washington state) are also examples of similar calumny. He asserted that somehow the actions of the Soviet Union and other socialist countries under contemporary conditions elicit "serious anxiety" in the "free world," since they use the favorable conditions of detente "for a dangerous buildup of armed forces in many regions of the world."

In the capitalist world the church always was the true lackey of the ruling classes in the cause of justifying all actions inimical to the people, especially wars and colonial adventures. It imbued and is imbuing soldiers and sailors with the belief that they, participating in such actions, are carrying out a cause pleasing to God, are fulfilling their duty, and therefore bear no responsibility for the most inhumane cruelties. And, in our time, military chaplains in the American, English and other imperialist armies participate in the most active way in such propaganda.

In this connection, very indicative is a statement made in the military religious magazine MILITARY CHAPLAIN (U.S.A.) by Maj G. Shapiro and Capt G. Wasserman-- Jewish chaplains who served in Pentagon troop units during the years of the American aggression in South Vietnam. Asserting that the U.S.A. conducted a "highly moral war" on Vietnamese territory, they come to the conclusion that the Americans somehow "not only had the right, but even were obliged to kill the Vietnamese Reds."

The military-religious services in the armies of the NATO member countries direct significant efforts towards supporting the unceasing campaign in the West to help the arms race, the buildup of troops, justification of imperialism's "basing strategy," its aggressive military blocs. Numerous religious ceremonies and services "for the glory of our weapons," held in staffs, units [chast'], and formations [soyedineniye] prior to and after various exercises and maneuvers serve these purposes. In particular, such a churchly propaganda show was organized in April 1979 in Naples prior to the large summer exercise held by joint NATO forces in the Southern European theater of operations.

To anathematize communism, the national liberation movement, and the struggle of the broad people's masses for peace and democracy, reactionary clergymen, including military, extol to the rooftops the notorious "Western way of life," bourgeois institutions and the "widespread equal opportunities" supposedly extant in the West.

They forcefully nurture loyal feelings among servicemen, propagandize "reliable" soldiers and sailors as the ideal, listing them among "those true to the service of God and the nation," call all kinds of wrath down upon those who are brave enough to even doubt the correctness of the ruling circles' policy, not to mention those who express disagreement with the aggressive acts of these forces, who refuse to participate in actions against the people. When, for example, in June 1978 after much procrastination legal forces in the state of Ohio decided to make several servicemen in the Ohio National Guard accountable for their participation in the shooting of a peaceful student demonstration at Kent State University (at that time four students were killed and several dozen wounded), the U.S. Army Chief of Chaplains' office made a special announcement about the supposed "immoral nature" of such a decision since it was "directed against people who were conscientiously fulfilling their official and spiritual duty." MILITARY CHAPLAIN even published an article by authors who supported the "decisiveness of people unafraid of using weapons if this is required to guarantee the security of American democracy against pro-communist agitators."

Reactionary clergymen persecute all free-thinking and progressive manifestations and at the same time support fully capitalism's evil manifestations--chauvinism, racism, Zionism, and fascism. Between 1976-1979, the American press, including military, repeatedly reported that Ku Klux Klan members and clergymen from the officer and NCO ranks, and members of their families, lit bonfires and held racial sabbaths at the Air Force bases at Laredo (Texas) and Albrook (Canal Zone), Naples Naval Base (Italy), Camp Pendleton Marine Corps Base (California), at Landstuhl (FRG), and others. Many of these activities were accompanied by mass beatings of Negro soldiers. In March 1979 NAVY TIMES reported that "for the first time in the history of the American fleet," racists organized a cross burning ceremony on a combat vessel. A group of sailors and chiefs on the aircraft carrier "America," when the ship was at Norfolk Naval Base (this city is in the southern part of the U.S.A. and is considered a citadel of racism) set up and burned a cross on the hanger deck, followed by the brutal beating of several Negro sailors, one of whom died.

Naked fascism exists side by side with racism. Several representatives of the West German Bundeswehr's military religious service participate very actively in propaganda aimed at rehabilitation of Hitlerism, the Nazi Wehrmacht, and all other fascist German institutions. Revanchist speeches resound openly today in Bundeswehr barracks, both the "works" of contemporary apologists of fascism and all types of writings by Nazi leaders are used at lessons during soldiers' ideological processing. Specially-prepared textbooks praising the "glorious past" of the Nazi Wehrmacht are sent to the troop units by direction of the Bundeswehr main staff's directorate of evangelical bishopric.

But, military chaplains not only propagandize the experience of the past. They very actively justify the present aggressive policy of militaristic circles and try to present war as a "natural condition of man," in which "peoples' perennial sinfulness" somehow manifests itself. American ministers wearing the uniforms of officers and generals participate in various symposia and conferences. Their goal is to place a certain aura of "legality" to the pretensions of the Western powers, primarily the U.S.A. towards a "military

presence" in various areas of the world, to justify the retention of hundreds of bases in dependent countries, and to substantiate the "right" to armed suppression of national liberation forces. Military chaplains from the English Army not only serve British neocolonialism with faith and truth, but also personally bless the soldiers who, with weapons in hand, deal with the working people of Ulster, "pardon the sins" of soldiers who kill women and children. Justification of Tel-Aviv's extremist policy, providing visibility to the "legality" of Israel's pretensions toward captured Arab lands, and training army personnel for new aggressive acts and military adventures are now the main tasks of army rabbis in Israeli troop units.

There is a multiple-branch military chaplain service in the armies of the U.S.A., FRG, Great Britain, and other imperialist states for similar activities and for accomplishment of numerous missions, the majority of which in essence having no direct relationship to religion. The largest military-religious service, organized as an independent military chaplain corps, is found in the U.S. armed forces. The Council on Chaplain Affairs, U.S. armed forces, consists of the chiefs of chaplains of the Army, Air Force, and Navy. It is considered the main consultative organ in the Department of Defense for matters concerning the religious and spiritual indoctrination of servicemen, as well as for military-religious propaganda among civilian youths, members of servicemen's families, and veterans.

The office of the chief of chaplains operates through chaplain departments and detachments on field force (ob'yediniye) and formation staffs, educational institutions, garrisons, bases, and so on. Unit and ship chaplains are the most active link in the military-religious propaganda sphere. There are two or three chaplains in each separate battalion, Marine regiment, air wing, and aboard ships, as a rule. Since churches of several denominations are active in the U.S.A., there are Protestant (75%), Catholic (18-20%), and Jewish (about 5%) chaplains. In addition, there are Orthodox, Mohammedan, Buddhist, and other ministers. Female chaplains appeared for the first time in the U.S. Army in 1975.

Overall, in the U.S. armed forces there are about 2,200 officers in the military-religious service in the rank of lieutenant to major general (rear admiral). Also, there are several thousand NCO's fulfilling auxiliary responsibilities in subunits and who assist the chaplains in various ceremonies in the T/O of the services. The largest is the U.S. Navy Chaplain Corps, which serves the Marine Corps as well. It contains 810 chaplain officers (including only 15 Negroes). There is on the average one military chaplain for each 1,100 soldiers in the U.S. Army.

There are significant numbers of cadre military chaplains in the armed forces of the FRG, Great Britain, France, Italy, Turkey, Japan, Israel, and other imperialist countries.

Direct political propaganda, somewhat masked by religious apparel, is the basic form of chaplain activity. Lessons they present to personnel are referred to differently in different armies. In the U.S. Army, they are called "character-building talks" or "the chaplain's hour" (these are held for 1 hour

once weekly, attendance strictly mandatory). In content these talks differ little from such direct forms of ideological processing as "commander's call" held by line commanders and chiefs with all categories of the rank and file and NCO's. Talks by chaplains are also replete with anti-Soviet slander and anti-communism directed towards full justification of American imperialism's foreign and domestic policy, advertisements for the "Western way of life," and glorification of their armed forces.

Under the guise of propaganda of spiritual values and such concepts as duty and honor, chaplains imbue soldiers (sailors) with the ideals of the infallibility and even sacredness of bourgeois society and of all its instruments, including the army. They require unqualified allegiance "to those to whom power has been granted" and appeal to personnel "to always be ready to rise up in the holy war against communists." Special training materials published by service chaplain service corps, such as brochures with the pretentious title "Duty, Honor, Country," affirm that somehow the "American nation was founded by God on the principles of honor and the worth of all its members without exception," and its armed forces "always and everywhere guarded the noble and exalted tasks".

Chaplains augment such lessons with other military-religious forms of activity for the soldier and sailor. Military chaplains for many years now in the U.S.A. are the most active organizers and participants in numerous "conferences on militant anti-communism," "symposia on defense of human rights in the communist countries," "vigilance seminars," and other such measures. As a rule, they are set up in military garrisons or on bases, where many "guests" are invited from civilian religious organizations and educational institutions, representatives of bourgeois political parties, industrial firms, and public information origins. This is all widely covered in the press and on radio and TV, published as the "voice of the American people," and propagandized to the entire world. In recent years similar religious and political representations are made on the NATO scale, in particular the NATO Council Directorate of Information, that on the American European Command staff, and so on. American Jewish chaplains are more and more taken up with advertising militant Zionism, attempting in every way to justify the Israeli adventurists' aggressive policy.

MILITARY CHAPLAIN is a special magazine of the U.S. military-religious service. Each service office of the chief of chaplains publishes its own bulletin and some field forces and formations have their own religious periodicals. Army and Navy radio and TV stations broadcast various religious programs daily--talks with chaplains, church services, sermons, and so forth. The screen is widely used to show propaganda films, including those of a religious nature (the series "Duty, Honor, Country"). Some films are produced by military film studios operated by the services, others are supplied to the Department of Defense by civilian, religious, charitable, and other organizations.

The ruling circles of the imperialist countries place great attention on using the church for their purposes, including guaranteeing combat readiness and maintaining the moral-psychological state of the personnel at a level which ensures that aggressive missions detrimental to the people are accomplished.

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WARNING SYSTEM: SOVIET VIEWS ON AWACS USED BY NATO

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 11, Nov 79 signed to press 6 Oct 79 pp 48-53

[Article by Col V. Tarabanov, candidate of military sciences, docent and Capt V. Sukhov: "Views on Employment of AWACS Aircraft"]

[Text] The military leadership of the U.S.A. and other NATO bloc countries, pursuing aggressive goals, continue to build up combat might of their air forces. Several measures are being taken to do so, as the foreign press reports, including: providing air forces with the latest combat aircraft and other aviation equipment and weapons, improving unit [chast'] and subunit [podrazdeleniye] combat readiness, and development of aviation command and control resources. One of the main trends in improving tactical air command and control on a contemporary level, according to foreign specialists, is deployment of a long-range radar detection and command and control system--AWACS (Airborne Warning and Control System) (Figure 1--figure not reproduced). This system is equipped with automatically-controlled information collection, processing, and transmitting systems.*

A similar aerial system had been built by the U.S. command during the initial period of the aggressive war in Southeast Asia. It included the DRLO [long-range radar] EC-121, C-130E airborne command post, and C-135 airborne radio relay aircraft.

However, experience from combat in Vietnam and research done in the U.S.A. showed the low effectiveness of the EC-121 and E-2C (in the U.S. Navy inventory) for aviation command and control in continental theaters of operations, especially Western Europe. This also impelled the American command to accelerate the building of the new, improved E-3A. It was initially intended only for air defense command and control of the North American continent. Later, in the foreign press, the mission of the E-3A was broadened--enhanced command and

*Details on the E-3A Sentry onboard equipment are found in ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, No 5, 1979, pp 50-53--Ed.

control of the air forces of the U.S.A. and other NATO countries in wars against the socialist and the developing states.

Overall, according to Western military specialists, AWACS is tasked to provide the Air Force commander in a theater of operations the capability to control subordinate resources in any situation. The supposition here is that it permits effective aviation command and control during accomplishment of the following missions: gaining air superiority, isolation of the battlefield, direct air support to ground forces, aerial reconnaissance, airborne landings, airlift, and so on.

In accordance with USAF developmental plans, the Pentagon made the decision to acquire 34 of the E-3A aircraft. For centralized employment, all are assigned to the 552d [Airborne Warning and Control] Wing (Tinker AFB, Oklahoma) and will be allocated to the services, as well as to the theater commanders in chief upon request. At present, the wing has 14 such aircraft assigned.

According to foreign specialists, it is necessary to have main bases where full maintenance support can be provided, plus several forward airfields, to support E-3A theater combat operations. Use as forward airfields of Tactical Air Command bases and civilian airfields capable of handling the Boeing 707 is contemplated. The concept is to operate alert E-3A from these bases, with only a minimum amount of maintenance work involved. These aircraft are also to be operated from unprepared airfields, so autonomous auxiliary power units have been installed in the aircraft.

Several U.S. Department of Defense representatives consider the E-3A very vulnerable in the air, so the USAF is devoting a great deal of attention to development of E-3A tactical employment. According to USAF and allied NATO specialists, the basic question here is selection of the patrol area and the altitudes to be employed. The requirements here are to operate the radar at optimum range, protect the system against REC [radioelectronic combat or electronic warfare--EW], and reduce the probability of E-3A destruction by enemy SAM's [surface-to-air missiles] and fighters.

Based on calculations made by American experts, modern EW resources can jam the E-3A at ranges up to 320 kilometers. If its patrol area is more than 320 kilometers away, it cannot detect low-flying aerial targets to a great depth behind the front line. This is stipulated by the fact that the detection range for such targets using the onboard radar is 370-460 kilometers (depending upon the area of target effective reflective surface). This contradiction, from what the foreign press says, has forced the USAF and NATO to find the E-3A tactical procedures that will ensure the optimal size of the area painted by the radar over enemy territory, yet avoid complete suppression of onboard systems, especially the radar (Figure 2 provides a diagram of the field of possible suppression of the E-3A onboard radar by ground-based EW resources--figure not reproduced).

One such procedure is simultaneous employment of two E-3A on patrol in the same area. Flying in trail along the front line, according to USAF specialists,

they will be able to avoid complete suppression of the onboard radar, even by rather powerful ECM [electronic countermeasures] along the main lobe of radiation. In this case the patrol area can be much closer to the front line, but such that the E-3A does not enter the kill zone of enemy SAM sites.

The thought is that placing the patrol area closer to the front line will permit fuller employment of the E-3A for command and control of offensive air operations to a significant depth behind the front line and, moreover, increase the size of the surveilled airspace along the front and, in so doing, reduce the required number of aircraft. For example, according to calculations by American specialists, 27 C-121, C-130E, and C-135 required for round-the-clock air patrol during the Vietnam War could have been replaced by 5 E-3A, which would have also led to improved effectiveness of American aviation command and control.

However, if the E-3A patrol area is placed closer to the front line, the threat presented to it by enemy fighters increases. In this event, SAMs in the area and specially-assigned fighters can be used for cover. Therefore, overall in the U.S.A. and NATO great attention is being placed on setting up coordination between the E-3A aircraft and SAM units and fighters.

Availability of information on aerial targets fed from the E-3A to the SAM battalion and battery command posts [CP] will make it possible, as is noted in the foreign press, to alter their tactics somewhat. In particular, during one exercise data from an E-3A were fed directly to a Hawk battery CP. In this case information began to flow when the range from the battery to the aerial target reached 160 kilometers. This made it possible for the battery radar transmitters to remain off the air until the target was within missile firing range. This procedure, in the opinion of American specialists, makes it more difficult for the enemy to detect and suppress a SAM site.

Repulsion of attacks by enemy aircraft penetrating the SAM site kill zone falls to fighters from the protected screen. Their vectoring to the target must be done in the automatic mode by an operator aboard the E-3A. The onboard computer has a program loaded to accomplish this. In those instances when the crew commander sees a real threat of the aircraft being shot down, he must employ his onboard EW resources and execute a maneuver--reduce altitude and depart for friendly territory simultaneously.

According to American specialists, given present decision making procedures, flight speed (a maximum of 740 km/hr) in combination with onboard EW will permit the E-3A to escape enemy fighters or significantly reduce the effectiveness of their weapons. However, such a maneuver is undesirable since it means loss of information on the air situation (the onboard radar can monitor the airspace only in turns with less than 10° of bank).

Striving to expand aviation command and control systems, the USAF is taking measures to successfully work out the transfer of full radar information from E-3A aircraft to ground-base CP. In particular, in one joint USAF-USA exercise held in October 1976, a video link from an E-3A to a CP was tested. The TV

equipment on the aircraft transmitted the scope picture to a TV receiver at the CP. According to specialists from both services, this method of data transmission permits real-time reporting to interested parties.

The USAF considers that the capabilities of new aircraft of this type can be realized only if crews are very proficient in flying and tactics. A special training center for E-3A crews has been built at Tinker. This complex includes a simulator, test radar, and command and control center. The simulator can recreate the flight of aircraft (friendly and enemy) and employment of EW. It has 9 operating positions like those aboard the aircraft. The actions of the trainees and their reactions to situational changes are monitored and recorded. Special panels allow instructors to control the situation at the 9 positions and input directly to information displays.

One of the most complex elements of E-3A flight crew training is air-to-air refueling. The simulator creates the conditions found during the rendezvous with the tanker, the approach and linkup, transfer of fuel, and the various deviations which can occur during refueling.

In the opinion of American specialists, development of refueling skills on the ground-based simulator radically reduces the number of E-3A flights required to master this operation. In particular, a crew only needs 4 to 6 flights in order to be certified after the ground training. They are flown without a back-end crew, then the refueling missions are flown with a full crew complement.

The E-3A are ready for flight on a special pad (Figure 3--figure not reproduced) set up for full ground maintenance support. After completing this and the visual inspection, the crews board the aircraft. After take off, the aircraft climbs on out to the patrol area. En route the crew checks out the system using an onboard computer, paying special attention here to data transmission lines. The radar is not activated until the order to do so is received from the ground-based control center, while the receiver functions as an ECM signal analyzer for the purpose of subsequent operating frequency selection and use of the most effective ECCM [electronic counter-counter-measures].

If the patrol area is far from the departure airfield or if the E-3A must extend its time on station, then the aircraft can be refueled in the air. The aircraft has a special program loaded in the computer to control the aircraft in the refueling area and to rendezvous with the tanker. It is set up in such a way that control is accomplished by both aircraft simultaneously.

The rendezvous with the protective fighter screen occurs en route from the departure airfield to the patrol area. The fighters are vectored to the rendezvous area by ground-based control points, then picked up and tracked by the E-3A. In some cases onboard equipment is used, including a special E-3A beacon and the fighters' course and distance measuring systems.

After arrival in the patrol area, the radar is activated, the operators receive from the ground information on the air situation, and the identification and

selection of targets against which fighter interceptors are to be vectored is accomplished. The intercept geometry is produced by a computer and the automated guidance commands are transmitted by a special communications links. The E-3A weapon controllers monitor the intercepts. The interceptors are provided updates in a way which ensures that they are in the optimum position to employ their weapons.

During training flights, the back-end crew learns to control tactical fighters accomplishing various missions: intercepting aerial targets at various altitudes, striking ground-based targets, rendezvousing with tankers, and so on. A complex aerial and EW situation is created here so that conditions are as close as possible to those found in actual combat.

As the foreign press notes, during these flights not only crew combat training is enhanced, but the effectiveness of the E-3A is evaluated and problems of coordination with ground-based automated command and control systems are worked out. This all greatly enhances their survivability and ability to exchange information. Thus, according to an assertion by the commander of the 25th NORAD Region, 2 E-3A during one exercise practically speaking replaced 11 ground-based radar sites and 1 control and warning center.

E-3A flights to overseas theaters of operations, where they participate in exercises and carry out combat patrols, are part of the combat training for 552d AWACW crews. In particular, they often visit the countries of Western Europe and operate from airfields in South Korea, Japan, and so forth. In the view of some foreign military specialists, during peacetime these aircraft, thanks to modern onboard systems, can be widely used for reconnaissance of the border areas of the fraternal socialist countries to a considerable depth without violating the airspace.

Under U.S. pressure, its allies in the aggressive NATO bloc agreed to deploy the AWACS in Western Europe. The intent is to acquire 18 E-3A and to organize one main and several forward airfields to support them.

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ARTILLERY SHIPS: SOVIET VIEWS ON NATO EMPLOYMENT

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 11, Nov 79 signed to press 6 Oct 79 pp 59-62

[Article by Capt 1st Rank G. Basko, candidate of military sciences: "Employment of Artillery Ships" (Based on experience in the Vietnam War and from NATO naval exercises)]

[Text] Naval development in the capitalist states following World War II is characterized, as the Western press notes, primarily by introduction of nuclear missiles into the fleet. This led to an overestimation of the role of traditional weapons types, in particular shipborne artillery, in combat actions at sea.

In the late 1950's and early 1960's the majority of foreign military specialists held the rather firm view that shipboard artillery (primarily large caliber) had outlived its usefulness and its further development lacked promise since it would have limited employment in possible wars.

This point of view had an impact upon the naval ship building programs in the leading capitalist countries. As the Western press shows, main attention during this period was placed on construction of nuclear missile and torpedo submarines, aircraft carriers, and surface ships (primarily destroyers and frigates) equipped with missile systems (URO, ZURO, PLURO--guided missiles, surface-to-air missiles, and antiship missiles). Artillery on these ships, as a rule, was represented by medium and small caliber antiaircraft artillery [AAA] mounts. Moreover, pure artillery ships then in the inventory were modernized and the large caliber artillery mounted was replaced by missiles.

The American imperialists' aggressive war against the Vietnamese people impacted heavily on the views of foreign military specialists relative to the future of artillery ships. Combat actions in Southeast Asia refuted the opinion at that time about the lack of promise of their employment in contemporary wars and confirmed, in particular, that shipboard artillery is a highly effective means of massed effect on an enemy in littoral areas. Among its

positive qualities the U.S. Navy listed its less dependence, as is the case with aviation, on the time of day and on weather, high degree of firing accuracy, and cost.

A large number of artillery and multiple rocket launcher [MRL] ships, which provided direct fire support to landings and to the ground forces operating in maritime sectors, participated in combat actions in Southeast Asia. They shelled shore targets in the DRV [Democratic Republic of Vietnam] and blockaded its shores.

To accomplish these missions, artillery ships were organized into fire support detachments consisting of one or two cruisers, two to three destroyers, and three to four MRL ships. Two or three ships formed a group to accomplish individual firing missions. Over a 24-hour period each shelled five to eight targets.

Fire support for the troops was accomplished along the littoral of South Vietnam and the Demilitarized Zone [DMZ], where forces were lacking to counter the ships. Ship firing positions were in direct proximity to the shore, which ensured rapid target destruction with minimum expenditure of shells.

At that time the American press widely advertised the successes of the MRL ships, pointing out the large amount of ammunition fired. Thus, in combat operations over a 6-month period one expended more than 10,000 126mm rockets. It also noted that the firing range of such ships was only 10 kilometers and they could only be employed near the DMZ, where there were no countermeasures from the shore. Other shortcomings were the absence of a fire control system and the concomitant inaccurate fires.

When providing fire support, the American command emphasized coordination among ships, Marine units [chast'], and the ground forces. Special coordinating groups attached to subunit [podrazadeleniye] and unit staffs were responsible for this. They coordinated the sequence of ship, air, and ground activities, delimited combat employment zones and areas, and allocated strike targets. Problems of ensuring the safety of troops and aircraft from being struck by friendly shipboard artillery were worked out very carefully. Support ships fired by request and were controlled by the staffs of the tactical subunits being supported.

Artillery ship tactics when shelling shore-based targets boiled down to the following. Based on reconnaissance data supplied by carrier-based aircraft, the ships steamed at up to 30 knots to firing positions 12-18 kilometers off shore and opened fire. The type of artillery fire depended on the assigned missions and nature of the target. When a military target had to be destroyed or suppressed, the shelling was done using all guns at the maximum rate of fire for 7-10 minutes. After results were determined, it was repeated until accomplishment of the assigned mission. As a rule, extended continuous fire was employed against populated points, roads, and rail lines.

When operating near the shore, special attention was paid to coordination between ships and aviation, which was handled using the mutual support principle. Prior to an airstrike against a target well protected by air defense resources, artillery ships suppressed the AAA. Fire ceased the moment the aircraft reached the weapons employment line. In turn, deck aviation came to the aid of ships experiencing resistance from the shore and suppressed enemy coastal artillery. The American press noted the relatively high proficiency of this support. Availability of direct communications between the ships and aviation as well as the fighter-bomber patrol ensured that aircraft were on the scene within 10-20 minutes of the request.

Special tactical procedures were used to cut losses from DRV coastal artillery fire (in 1967 alone, 15 ships were damaged, including 2 cruisers). After the first enemy shells struck, the ships took up a course away from the shore, developed maximum speed, and, maneuvering in a zig-zag, exited the coastal artillery fire area. Smoke screens and chaff were employed as camouflage. Shipboard active ECM [electronic countermeasures] was used against enemy fire control radars. The stern artillery group returned the fire.

Artillery ships played a large role in the naval blockade. They captured and destroyed Vietnamese boats and junks, trying thereby to stem the flow of weapons and supplies to the patriotic troops in South Vietnam.

The task of cutting supplies on the inland waterway system of canals was difficult, as was noted in American magazines. Firing on small junks and sampans not visible from the ship was accomplished with the aid of a spotter aircraft.

Experience in the employment of artillery ships in the Vietnam War, in the opinion of foreign military specialists, showed that they are unmatched where suppression of enemy firing positions on the shore is concerned. This was learned when developing new artillery systems. As the foreign press notes, a special program began in the U.S.A. to develop and improve medium and large caliber shipboard artillery. As a result, the standard MK45 turret-mounted 127mm AAA gun is already coming into the inventory and a simplified MK 71 turret-mounted 203.2mm AAA gun is undergoing tests. Beginning in 1980 several Spruance-class destroyers (see the colored insert) [insert not reproduced] undergoing repair will have the 127mm AAA gun replaced by the 203.2mm gun.

Ships in the English, French, and Italian navies are also being armed with new medium caliber artillery systems (152mm twin and 114mm standard turret-mounted gun for Great Britain, a 127mm and 100mm standard turret-mounted gun for Italy and France, respectively).

The arsenal of small caliber artillery providing the ship with air and anti-ship defense is even more varied.

Based on Vietnam War experience and numerous standard annual NATO naval exercises (Dawn Patrol, Display Determination, Strong Express, and so on),

the Western press underscored that, in contemporary warfare, the following main missions could be assigned to artillery ships: providing direct fire support to landing forces; joint actions with the ground forces operating in maritime sectors; maintaining blockades; shelling enemy shore targets, troop concentrations, and firing positions; ASW, air, and antiship defense of aircraft carrier formations and convoys; ASW patrol; and reconnaissance.

Special attention is being devoted to artillery ship tactics when providing fire support to landing subunits. Artillery support to the landing party as the battle is in progress, based on experience from U.S. Navy and NATO exercises, is provided by cruisers, destroyers, and frigates. Ship activities usually begin on the day of the landing at dawn and continue until the landing party reaches the beach. During this period, surface ships conduct fires to suppress and destroy targets and personnel on shore.

As the first waves of landing troops hit the beach, fire from the ships shifts to the depth of the enemy defense, then fire support is accomplished based on requests from the commanders of the landing subunits.

Shipboard artillery's greatest significance occurs during the period from the beginning of the amphibious landing until artillery subunits reach the beach and deploy and enough ammunition is on the beach. After that, surface ships protect the landing area flanks, shell targets in the depth of the enemy defense, or fulfill fire support requests.

Foreign military specialists think that the new artillery systems coming into the inventory and refined employment procedures make it possible to more optimistically examine the role of artillery in future combat at sea. However, they emphasize here that construction of pure artillery ships has essentially come to an end and, as a rule, standard ships equipped with artillery, missile, and ASW weapons will be built in the future.

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SUBMARINE DETECTION: SOVIET VIEWS ON U.S. SYSTEM

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 11, Nov 79 signed to press 6 Oct 79 pp 70-74

[Article by Capt 1st Rank-Engr Yu. Tarasyuk: "The U.S. Navy ASWEPB."
Passages in slant lines printed in bold face]

[Text] Since 1966 the U.S. Navy has been using ASWEPB (Antisubmarine Warfare Environmental Prediction System), which supports the collection of oceanographic data in the waters of the world ocean to forecast the state of the medium (the layer of atmosphere at the water, the surface layer of the ocean, and the water masses to depths of 1,500-2,000 meters). Such information is required for formations (soyedineniye), individual ships, and ASW aviation for effective employment of radioelectronic means and weapons in the battle against submarines. Great attention here is placed on forecasting the probable range of action and operating conditions for sonar, radar, non-acoustic, and other means of detecting submerged and surface targets and destructive means they employ (cruise missiles, missile torpedoes, torpedoes, and so on).

Foreign specialists note that, from the moment it began to function, the aforementioned system has had many demands placed on it since, during that time, the U.S. deployed a global tracking system, over-the-horizon radars appeared, and long-range and ultra long-range sonar systems were developed. In addition, the radars and sonars which serve ASWEPB daily have significantly increased operating range (for example, AN/SPS-88, the surface ship AN/SQS-26, AN/SQS-56 and -56A, AN/SQS-35, AN/SQR-15, -18, and -19, and AN/AQS-13 GAS [sonars], sonobuoys, and the AN/BQQ-5 and -6 submarine sonars).

ASWEPB forecasting is accomplished within the frameworks of certain periods.

/Long-Range Forecast/ (5 days and more) made at shore-based long-range forecasting centers using atlases, manuals, weather forecasts, and analysis of the hydrometeorological situation for an extended forthcoming period. Maps, diagrams, recommendations, and regulations are produced.

/Short-Range Forecast/ (up to 48 hours) made by the staffs of the operational fleets, naval bases, and ship formations. The parameters of the medium and the operating range of radioelectronic means are forecast. Data are depicted on overlays and maps.

/Current Forecast/ (up to several hours) compiled by aviation and ship formations and aboard individual ships. Information stored on recording tape and in electronic displays is used for operational purposes.

/Near Real-Time Forecasting/ done directly aboard ships or aircraft (helicopters) using monitoring equipment. In recent years, the U.S. Navy has concentrated much attention on this type of forecasting since, in the opinion of specialists, it must ensure that target detection and tracking station characteristics adapt to rapidly-changing medium conditions.

All ASWEPS technical elements are tied in with the U.S. weather services. For example, data from measuring the vertical distribution of the water temperature (or acoustic velocity) are used not only aboard the ship taking the readings, but are transmitted to regional weather forecasting centers located in Norfolk (Virginia), on Guam, Pearl Harbor (Hawaii), Rota (Spain), the center for long-range forecasting of the state of the surrounding medium supporting the U.S. Navy (Suitland, Maryland), the U.S. National Weather Center (Camp Springs, Maryland), and the Oceanographic Data Bank (Washington, D.C.).

All information about the medium required for compilation of manuals and long-range forecasting of operating range, concerning the parameters of radioelectronic equipment, and on target detection probability is collected at the Center for Digital Weather Forecasts (Monterey, California). Operators here prepare and dispatch via TV and telephoto channels maps and diagrams containing data on the thickness of the subsurface layer, characteristics of the thermal barrier and of the underwater sound channel, information on the long-range ensonification zones and thermocline zones, on the recommended sonar antenna submersion and towing depths, on RGB [sonobuoy] hydrophone placement depths, and so forth.

Carrier formations use information from regional weather forecasting centers when computing probable sonar operating ranges. These mainly are curves of the vertical temperature distribution (acoustic velocity) in areas near the location of combat operations obtained for the past time period. They are used at all forecasting levels until all necessary current readings have been taken.

The foreign press notes that, since ASWEPS became operational, equipment for measuring the values of the medium's parameters and ways to display the results are being modernized and programs and methods of computing the characteristics of physical fields are being improved.

The basic requirements for the onboard equipment used in this system involved the necessity to take readings while underway.

At the present time several types of bathythermographs are made by U.S. firms (Table 1) [table not reproduced]. The characteristics of acoustic velocity meters aboard oceanographic vessels and U.S. Navy and NATO ships are shown in Table 2 [table not reproduced]. The drawing shows a diagram of how to measure the vertical distribution of the acoustic velocity using an XSV meter.

Radio sondes, refractometers, IR radiometers, acoustic locators, depth gauges, cymoscopes, and other instruments are widely used to measure the values of the atmospheric layer near the water's surface, water surface temperature, and the height and period of the sea's wave action using contact and non-contact means. They are installed aboard ships, on the P-3C Orion, and helicopters. In recent years, weather satellites such as Block 5D, NOAA, and Tiros, plus Landsat natural resources reconnaissance satellites, have been widely used to gather hydrometeorological information.

However, in spite of the great capabilities of satellites, U.S. Navy specialists as usual prefer automatic buoys which make it possible to obtain information not only on the surface layer, but also about the water thickness. Since ASWEPS has existed, the National Oceanic and Atmospheric Administration has used multipurpose large, medium, and small anchored and drifting buoys. There is now a third generation of technically equipment for taking readings installed on large oceanographic buoys. According to the American press, a standard measurement system with a collection of sensors and standardized inputs will be set up by 1980. This will make it possible to select sensors in accordance with assigned missions.

Automated means for processing data on the state of the ocean medium are widely used today and they aid in solving the problem of upgrading the forecasting of proposed operating conditions for the radioelectronic equipment used in ASW. For instance, evaluation of sonar operating range and of the detection zones for submerged targets is accomplished using special electron beam depictions or using graphs of signal strength reductions showing range which are done by computers and automatically displayed in graphic or digital form on the screens of output devices, overlays, printers, and the like. Information on vertical temperature distribution (acoustic velocity) in sea water as well as on the special features of sound reflection from the surface or from the bottom, is the initial data for these calculations.

A small electronic device (Table 3) [table not reproduced] is used for these purposes by the NATO navies. Using it, an operator evaluates the sound distribution conditions in the area where the ship is located and in the zone where submerged targets might be detected. On the basis of this information he selects the most effective mode of sonar position operation.

The foreign press reports the use of methods of mathematical modeling of the different phenomena and processes in accordance with a program having

an important applied value, in particular when forecasting the state of the medium to assist ASWEPs. For example, a specially-programmed CDC-3600 computer calculates the vertical distribution of the acoustic velocity (taking into account temperature, water salinity, and depth) and the gradients of the beam trajectory structure, and also determines the value of the intensity and the loss as acoustic signals are disseminated.

Under the guidance of the research and development (NIOKR) directorate, the U.S. Navy developed a system which aids in finding, in oceanographic data banks, acoustic velocity profiles required to model the hydrological situation in the given region. This ensures receipt of the requisite statistical information on the characteristics of the acoustic velocity field. The capability exists to choose limitations for the month of the year and depth.

In several cases, along with onboard BIOS (expansion unknown) and computers, the sonar fit includes add-ons, such as was the case with the AN/SQS-26. This was a special unit which made it possible to determine operating range from measurement of the vertical distribution of the acoustic velocity.

U.S. Navy specialists point out the following characteristic tendencies in the area of research into the world ocean:

- broad naval participation in all international research programs, organization of systematic observation of Gulf Stream rings, intensive study of frontal zones, deep synoptic eddies, and phenomena arising on the border of currents and water masses with different qualities, and obtaining statistical information on the microstructure of the acoustic velocity field;

- use of instruments installed on satellites, neutral buoyancy floats, sonar current meters, automated submerged buoy stations, sonobuoys, and acoustic equipment to monitor the medium, and so on;

- creating special meters to measure the vertical distribution of the deflection index, moisture, temperature, and acoustic velocity for aerial vehicles, surface ships, and submarines;

- further refinement of models and programs which allow, with high accuracy, calculation of the operating range of radioelectronic equipment and development of small instruments for visual display of anticipated target detection zones.

The U.S.A. and NATO arsenal of technical devices to monitor large areas and individual locations has been augmented in recent years. Programs have appeared to compute the conditions for ultra long-range target detection using sonar, radar, and other means. In addition, systematic observation of the situation, in space and in time, where the Atlantic and Pacific meet has begun and radar mapping of wave action from the shore and from satellites is underway. Foreign specialists point to the fact of monitoring synoptic eddies based on results of measuring the surface temperature.

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Foreign press material has been used for the preparation of articles by
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NATO: SOVIET REVIEW OF COMBAT CAPABILITIES

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[Article by Col Gen A. Shurupov: "Some Problems in the Art of Warfare Abroad"; according to the views of foreign military specialists]

[Text] "The leading circles of the United States and several other NATO countries," stressed the General Secretary of the CPSU Central Committee and Chairman of the Presidium of the Supreme Soviet USSR, Comrade L. I. Brezhnev, in answers to questions of a correspondent of the newspaper PRAVDA, "have set forth on a course which is hostile to the cause of detente, a course of whipping up the arms race and leading to an increase in the danger of war." This is indicated by the steady growth in the military budgets of the imperialist states, the decisions of the NATO session concerning the placement of new American medium-range nuclear missiles in Western Europe, and the five-year militaristic program presented in the speeches of the United States President and Secretary of Defense. The striving of the NATO militaristic forces to achieve military superiority over the Soviet Union and the other countries of the Warsaw Pact as a whole is being manifested ever more clearly.

In this connection, in recent years the development of the art of war in the armies of the capitalist states has acquired an exceptionally purposeful, aggressive nature. It is directed toward the preparation and conduct of war primarily against the socialist states. In the American regulations which have been published in recent years it points out directly that they serve as guidance for the conduct of military operations primarily in the European theater of war with the armed forces of the Warsaw Pact. Here, it is stressed that if the armed forces received considerable reinforcements in the past even after the start of combat operations through the mobilization of all resources, now they must enter the war in an organized manner and win victory in the first operations with the forces which were created in peacetime. It is believed that for the attainment of such decisive goals an important factor will be the mastery of the art of controlling subordinate troops under the difficult conditions of a contemporary operation (battle) by the command (commanders) and staffs.

Along with the development of the theory of nuclear war, which has occupied an important place for many years in the United States and NATO, Western specialists have begun to attach more and more significance to questions of organizing and conducting combat operations with the employment of conventional weapons alone. Newer, more effective models of weapons are now being created and views on their employment in a combat situation are being developed.

All this puts us on our guard and requires that we fixedly follow the direction in the development of military theory in the armies of the imperialist states.

It should be noted that in the armed forces of the majority of NATO countries the art of war is divided into two parts: strategy and tactics. Operational art is not distinguished as a separate part; however, it would be incorrect to assert that it does not exist at all, for it exists objectively. The problems of the preparation and conduct of operations are comprehensively studied, but they are referred to strategy or to tactics.

Problems in the preparation and conduct of war as a whole and of big operations in theaters of war and theaters of military operations belong to strategy in the views of foreign military specialists. Combat operations of large forces and large units in a TVD [theater of military operations], with a minor exception, belong to tactics which encompass problems in the preparation and conduct of the battle and operation. Some of these will be discussed in this article.

As is known, combat operations are subdivided primarily into the offense and the defense, and much has been written abroad about their role and place in the attainment of victory over the enemy.

Hiding behind false slogans of a "Soviet threat," military circles of the United States and NATO are conducting active military preparations and carefully concealing their aggressive trend. It is namely for these purposes that the military press of the Western countries published a large amount of material on the advantage of the defense over the offense. Moreover, even in the U.S. Army Field Service Regulations it points out that the defender has more advantageous conditions: the maximum use of cover and camouflage, the selection of the ground for conduct of the battle and engagement, improvement of positions and lines with consideration of the greatest weapons effectiveness, engineer improvement of the terrain and emplacing minefields, the capability to open fire at the most convenient moment, and so forth. The attacker, entering into contact with the enemy, is forced to deploy his troops, wage battle on terrain selected by the defender, clear the mines, and cross obstacles under the effect of fire and destroy camouflaged weapons.

Despite these tendentious statements, preference is given to offensive actions in the armed forces of the imperialist states. Regulations, manuals, and other official materials stress that the offense permits the commander to seize the initiative and impose his will on the enemy. Only by the

offense can decisive goals be attained in a battle, operation, or war as a whole. In some cases, the troops will be forced to assume the defensive; however, the latter is considered as a temporary form of combat operation which is conducted to create favorable conditions to go over to the offense. Moreover, the following is noted in the regulations: even in the defense the commander should try to exploit any opportunity to seize the initiative and launch a decisive offensive.

From what has been said, it is clear that the commands of the main imperialist states consider the offense to be the main type of combat operation. This is also confirmed by exercises of the "Wintex," "Autumn Forge," and other types of exercises which were conducted in NATO. Problems of a decisive offensive, including the assault crossing of wide water obstacles, were worked out on the basic stage of each of these. At the same time, to weaken the enemy and then launch a decisive offensive the conduct of a forced as well as deliberate defense is not excluded.

Let us examine some of the most important problem questions of the offense and defense which are discussed on the pages of the foreign press.

The first such problem is the correlation of forces in an offensive operation and battle. Is it necessary to have overall superiority in men and weapons in the offense? In the opinion of the command of the armed forces of the United States and NATO, the creation of such superiority is not mandatory for the successful conduct of an offensive operation and battle. Moreover, in the Field Service Regulations of the U. S. Army it points out that in the attack superior enemy forces can be destroyed with smaller forces. But here, it is necessary to master the art of war better than the opposing side. It is recommended that a superiority in men and weapons be created on the main direction and breakthrough sector, that the factor of surprise be exploited, that the attempt be made to deceive the enemy, that firepower be employed effectively, and so forth.

It is envisioned that for the successful conduct of an offensive there should not be a general superiority over the enemy in men and weapons in the entire zone of the formation and large unit but there should be a six-fold superiority over him on the breakthrough sector which is attained by the concentration of the main body on the direction of the main effort. Consequently, such a correlation should be created only on specific sectors of the front.

In this connection, the foreign press stresses, such an important problem as the concentration of efforts on the main direction arose long ago and has become even more urgent now in the art of war, especially under conditions where only conventional weapons are employed. It is believed that the creation of superiority over the enemy in men and weapons is the decisive condition for his destruction. Attention is also directed to the fact that the concentration of men and weapons at the necessary place and at the necessary time is a two-sided game. The enemy will also strive for this. Therefore, the one who preempts the other in the execution of such a maneuver wins the engagement.

The question of the correlation of forces and the striving to change it in one's favor on a large scale (in a theater of war or theater of military operations) is called the main problem of the high command by foreign military theoreticians. Responsibility for the concentration of men and weapons on the battlefield is assigned primarily to the corps and division commanders.

The foreign press has reported that even now the NATO command has created big formations of armed forces in the European TVD which exceed by far the requirements for defense. A long-term program for the buildup of military power in Europe has also been adopted. In improving the quality of weapons, increasing the number of troops, and working out plans for more efficient mobilization and the strategic lifting of troops from across the ocean, the United States and NATO are striving to see that by the start of military operations the formations of their troops in Europe would not only not be inferior to the men and weapons of the Warsaw Pact countries, but would even be superior to them. But if, in the initial period of the war in European TVT's the enemy as a whole is numerically superior to the forces of the North Atlantic Alliance, then under these conditions, it is stressed in the regulations, corps and division commanders will have to create an advantageous correlation by the concentration of men and weapons on the main direction with the goal of launching an attack on individual sectors of the front. Such goals are evidence that the NATO command intends to conduct an offensive already at the very beginning of the war.

Foreign military specialists believe that the command and staffs must be able to employ many factors skillfully to create the necessary superiority, in particular the use of surprise, the concentration of fire- and shock power, and speed of actions.

In NATO, great significance is attached to the exploitation of surprise to ensure the necessary superiority because thanks to it the routing of even superior enemy forces can be achieved--troops which have been taken unawares or are stunned cannot offer proper resistance. It is stressed in the official manuals of the U.S. Army that with the presence of fewer forces than those of the enemy, corps and division commanders must devote main attention to the factor of surprise as well as to deceiving him. The regulations stress that swift maneuver, rapid regrouping of forces, and employment of highly mobile weapons permit the attainment of actions which are unexpected by the enemy and, consequently, superiority over him.

An important factor which ensures the creation of superiority over the enemy is secrecy. The principle of massing men and weapons requires the shifting of troops to the area where the launching of the main effort is planned. It is envisaged that all measures in regrouping will be accomplished secretly to deceive the enemy relative to the grouping of friendly forces, its strength, and the time and direction of the blow. For this, it is recommended that the enemy be hampered or deprived of the possibility to conduct reconnaissance, that the terrain and camouflage and deception be used correctly, that forces be regrouped primarily at night and under conditions of limited visibility,

and that means of electronic warfare and other measures to ensure secrecy and deception be widely employed.

Foreign military specialists assert that it is necessary to make maximum use of the high mobility of tank and mechanized large units, airborne and air-mobile forces, the mobility of field artillery and antitank weapons, and the high maneuverability of helicopter gunships and close air support for the concentration of fire- and shock power. This will permit the command, first, to create superiority over the enemy in firepower and shock power on the selected direction comparatively rapidly and, second, to regroup quickly and concentrate forces for launching an attack, in other words, to achieve surprise.

It is believed that the time factor plays the main role in the concentration of men and weapons for the attack. If the transfer is accomplished slowly, the enemy is able to undertake responsive measures and it will not be possible to achieve the necessary superiority for a successful attack. Moreover, as a result of such operations heavy losses may be suffered and the chances for success may be missed.

An important question in the organization of the offensive is the selection of the direction of the main effort. As stressed in the foreign press, it is solved depending on the men and weapons used. When nuclear weapons will be employed, it is recommended that the main effort be launched against the strongest point in the enemy's defense, and when only conventional weapons are used--at the weakest and most vulnerable place in his defense system.

In the offense with the employment of conventional weapons, it says in the regulations of the U.S. Army, the superiority of men and weapons must be concentrated where the enemy is most vulnerable. It is believed that his grouping of forces cannot be equally strong everywhere and there must be weak places in his combat formations. Therefore, large-unit commanders must locate such places in the enemy's defensive system in good time and accurately, executing broad maneuver and deceptive operations, and must concentrate their main forces here and launch surprise strikes on these directions.

In the opinion of foreign military specialists, as a rule offensive operations in the absence of enemy open flanks should begin with the breakthrough of his defense. However, under conditions of combat operations with conventional weapons such a breakthrough is a difficult problem since it is very difficult to break up a contemporary, strong enemy defense which is saturated with weapons, including armored, and to destroy its integrity. Judging from statements in the Western press, the solution of this problem is proceeding along the following lines.

First--it is envisaged that the breakthrough be conducted on a narrow sector of the front. Thus, a division may break through the enemy defense on a sector 3-6 kilometers in width and only in individual cases, when the defense has not been sufficiently prepared--6-10 kilometers. The army corps will accomplish this same mission on a sector of 10-12 kilometers on the average.

and an army group--on two or three sectors each from 10 to 25 kilometers wide (depending on the number of large units participating in the breakthrough).

Second--it is contemplated that the breakthrough will be accomplished with superior forces: a superiority in men and weapons of at least 6:1 over the enemy should be created.

Third--it is necessary to ensure the reliable destruction of the enemy's defense by fire, which is the basis of any battle. Success or defeat in battle depends virtually completely on the neutralization of the enemy's weapons. This pertains completely to the breakthrough.

The combined-arms commander has at his disposal various weapons for destruction by fire: tanks, artillery, PTUR (antitank guided rockets), helicopter gunships, and close air support aircraft. The organization of cooperation between them and the coordination of operations for their most effective use when accomplishing missions for destruction by fire acquire especially important significance. The regulations recommend the strict monitoring of the distribution of the weapons allocated for the destruction of various targets. It is believed that this is one of the most important problems of a contemporary battle and engagement. It is envisioned that the integrated destruction of the enemy by fire will be accomplished in the interests of the breakthrough.

On what is main reliance placed in organizing such destruction? In order to answer this question, we must see what weapons may be involved.

As was noted in the foreign press, each motorized infantry (armored) division of the main capitalist states has about 170 guns and mortars. Furthermore, it may be reinforced by a brigade of field artillery consisting of four to five battalions (70-80 guns). If the division concentrates the main body (up to two thirds) on the breakthrough sector (an average of 5-6 kilometers), a density of about 40 guns and mortars per kilometer of breakthrough front will be created. A portion of the weapons of the second-echelon division (60-70 guns) and the artillery left at the disposal of the corps (50-60 guns) may also be employed on this direction. Through these weapons, the artillery density on the breakthrough sector may be increased to 60 guns and mortars per kilometer of front. This amount of artillery, as foreign military specialists believe, will hardly ensure the reliable neutralization of the enemy's defense.

It is also envisaged that this problem will be solved by employing helicopter gunships, tactical aviation, and subsequently also through implementation of the "shot-hit" concept, that is, the creation of reconnaissance and firing complexes which would permit the reliable disclosure of enemy objectives and their destruction with the first round. In addition, work is being conducted on new weapons models of all calibers, rocket launchers, and on the modernization of existing artillery systems while new explosives and ammunition with increased destructive capability are being developed.

The fourth direction in the solution of the breakthrough problem is the speed and decisiveness of the actions by the strike grouping of forces. Otherwise, in the opinion of foreign specialists, the breakthrough may be transformed into the uncoordinated and indecisive gnawing through the enemy's defense.

The deep structuring of the combat formations and the timely commitment of the second echelons (reserves) to the battle are envisioned for the breakthrough of the defense. It is believed that the strike should cut the enemy's defense deeply. It is recommended that after they have suffered considerable losses and the rate of advance has slowed, the troops of the first echelon be replaced by fresh forces which will be capable of completing the breakthrough of the enemy's defense and developing the offensive in its depth.

An important component of offensive operations is the exploitation. In accordance with the estimates of foreign specialists, specially allocated highly mobile large units, units, and subunits (so-called exploitation forces) will be used more often for the accomplishment of this mission. They must advance rapidly into the depth, seize important terrain sectors and heights, cut the path of withdrawal, and destroy the enemy's reserves, depriving him of the capability to organize a defense on new lines. It is believed that they will not stop to destroy encircled formations of enemy troops but are required to bypass them and advance into the depth to accomplish the assigned mission. It is required that such large units and units be relatively strong in their composition, be able to operate independently and in coordination with airborne forces, and be supported by tactical aviation and helicopter gunships.

In the opinion of Western military specialists, airborne forces and airmobile troops will be used more often for the capture of objectives and positions in the enemy rear which, to a considerable degree, may exert an influence on the development of the offensive operation as a whole. In all cases, the airborne personnel will operate suddenly and swiftly, conduct attacks from the march, or execute diversionary maneuvers to break up the enemy's withdrawal or his regrouping. The regulations stress that the commander of the exploitation force must constantly remember the danger of dispersing his forces and that he can accomplish his assigned missions only by the combined efforts of all forces allocated for the accomplishment of these missions. His actions must be distinguished by boldness, the competent use of available weapons, and firm leadership.

The troops which are supporting the exploitation forces and following behind them expand and consolidate the breakthrough area and destroy the enemy forces which remained in the rear area.

Such are the most important, problem questions of offensive operations which are discussed on the pages of the foreign press and ways for their solution.

A considerable number of publications which have appeared abroad in recent years are connected with the organization and conduct of the defense. Here, the majority of them stress the necessity to train the troops for the conduct

of active combat operations. And this is not by chance. The regulations of the U.S. Army point out directly that the defense is conducted to weaken the enemy troops prior to the start of their own offensive operations.

One of the important questions in defensive operations which are considered by foreign military specialists is the correlation of forces. It is believed that the defender can accomplish his mission successfully in battle with an enemy who has a three-fold superiority, and for a short period of time, even six-fold. The official manuals of the U.S. Army point out that in Europe division commanders should conduct the assembly of combat units at their own discretion, bringing their density to eight battalions per fifth of their defense zone so as to be able to hold out against 20-25 battalions. It is recommended that the remaining territory of the division defense zone be covered by tactical aviation, helicopter gunships, armored cavalry units, and the remaining battalions which must be ready to conduct a broad maneuver.

The defense system need not be equally strong along the entire front. Therefore, to attain success in a battle (operation) it is very important to establish correctly the direction of the attacker's main effort. The commander, U.S. Army regulations stress, should shift the main forces of his troops quickly and decisively so as to create a favorable correlation of forces on the direction of the enemy's main effort and for this it is necessary to risk less threatened sectors. It is envisioned that the maneuver will be accomplished not only from the depth, but also from the flanks, exploiting the high mobility of armored and mechanized units, helicopter gunships, and antitank subunits which have been moved by air.

Great attention is devoted to the field artillery. According to the views of the NATO command, the division should be able to concentrate up to three-fourths of its organic and attached artillery on the main direction. As a rule, corps artillery will operate almost completely on the main direction.

It is also planned to concentrate the men and weapons of troop air defense [AD] for covering the most important objectives. It is assumed that enemy aviation will launch strikes primarily against objectives located beyond the range limits of the artillery; therefore, troop AD men and weapons should be used primarily to cover the command posts of large units and formations and the dispositions of their reserves and rear services support organs. Only part of the AD forces can be deployed in the division's main defensive area.

Increasing the defense's stability is considered to be the most important problem of the contemporary defense.

Foreign military specialists are following several directions in the solution of these problems. The first of them is a further increase in the activity of the defense: in recent U.S. Army regulations the "active defense" is singled out as a separate method for the conduct of a contemporary defense. It is stressed that both the mobile and position defense in their classical form have substantial shortcomings. According to the estimate of foreign military specialists, the mobile defense contains a comparatively weak first

action while the position defense lacks flexibility which is so necessary under contemporary conditions where the attacker possesses high maneuverability, firepower, and shock action.

It is believed that contemporary armored and mechanized large units have a larger selection of methods of operation for the conduct of the defense than in its former, classical forms. They can provide flexibility of defense by concentrating their troops for rapid reaction to enemy actions and are capable of destroying attacking units in the entire depth of the forward (main) defense area instead of conducting a fierce battle on one line. They will also conduct combat actions in motion, without dismounting and digging in. In the opinion of NATO military specialists, commands and staffs can take reasonable risks, stripping less threatened areas (sectors) and concentrating their forces on the main direction or to repel new threats. In the foreign press, this method of defense is called an "active defense."

The second direction in the solution of the defensive stability problem in the armed forces of the main capitalist countries is increasing its depth. The division's defensive depth, for example, will reach 50-60 kilometers and will consist of two areas--main and rear (up to 30 kilometers each). In the course of exercises, as reported in the foreign press, the depth of defense of an army corps sometimes reached 100-120 kilometers.

The third direction is strengthening the antitank defense, that is, the ability of the contemporary defense to repel the massed attacks of tanks and other armored weapons. For this, the large units and units are saturated with antitank guided rockets, helicopter gunships, and new types of weapons (special cluster and guided ammunition for aviation and artillery).

Finally, the fourth direction consists of the fact that the contemporary defense is saturated with weapons which are protected with reliable armor and which, exploiting advantageous terrain conditions and engineer improvements, can increase its stability to a considerable degree.

One of the important problems in contemporary art of war is considered to be combating enemy aviation and suppressing his AD system. For its solution, the United States and NATO envision the conduct of offensive and defensive air operations and, primarily, to seize and retain air superiority. As a rule, they are planned on a scale of a theater of military operations.

The goal of these operations has been expanding in recent years. Thus, in the course of an offensive air operation it is intended to accomplish: the neutralization of the enemy AD system by launching strikes on antiaircraft guided missile positions and fighter airfields; the destruction of enemy aircraft in the air and on airfields and his nuclear weapons; disruption of the system for the command and control of aviation and troops by destroying communications centers, aviation guidance centers and posts and other organs for the control of aviation, air defense, and troops; and the disorganization of the system for rear-services support and demoralization of the population by

launching strikes against big depots, bridges, crossings, and political-administrative centers.

The involvement of the maximum possible amount of forces and weapons at the disposal of the commander of the armed forces in a theater of military operations is envisaged for the conduct of this operation in a TVD. In such an operation, several massed strikes may be launched in one or several days.

In its content, a defensive air battle is an air-defense operation. It is conducted to repel the intrusion of enemy aviation into the depth of friendly air space, and in case of penetration--for its destruction.

The manuals of the U.S. Air Force point out that although such an operation has great significance to ensure the security of friendly troops and objectives and to support the accomplishment of combat missions by friendly armed forces, the most rapid and effective result can be attained in the course of offensive air operations.

Such are some of the problem questions of the art of war which are being discussed on the pages of the military press of imperialist states.

It should be kept in mind that they are all directed for the most part toward the preparation of aggressive military operations against the socialist states. Therefore, the Soviet servicemen must consider them in their practical activity in defending the motherland and must constantly remember the instructions of the Soviet minister of defense, Marshal of the Soviet Union Comrade D. F. Ustinov, that the Armed Forces of the Soviet Union should always be at the level of contemporary requirements and in constant readiness to give a decisive rebuff to any aggressor.

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NATO: SOVIET REVIEW OF NATO GROUND FORCES EXERCISE

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[Article by Maj Gen N. Ivlev: "Exercise 'Hart Faust'"]

[Text] In striving to sow distrust and hostility toward the Soviet Union and the other countries of the socialist commonwealth, the militarist circles of the Western countries are intensifying the propaganda ballyhoo about the allegedly achieved superiority of the Warsaw Pact countries in numbers of troops and their striving to overtake NATO in level of armaments. With such false fabrications they are trying to distract the attention of their peoples from the broad military preparations being conducted in the countries of Western Europe which has now been transformed into a tremendous military range. Here "fierce battles" in repelling "aggression from the East" are initiated every year in the immediate proximity of the boundaries of the socialist states. The NATO generals hypocritically announce the exclusively defensive nature of the maneuvers and exercises being conducted and which in fact have a clearly expressed aggressive nature.

Nor was the series of exercises of the combined NATO armed forces under the code name "Autumn Forge-79," which took place in September-November 1979, an exception. As the Western press notes, the biggest within its framework was the two-sided exercise of the FRG I Army Corps (with the participation of troops of the United States, Denmark, and the Netherlands) under the code name "Hart Faust" [Hard Fist] which took place from 17 through 21 September in the western part of Lower Saxony and Munsterland (FRG). In the opinion of West German military experts, the selected exercise area, which abounded with swampy sectors, rivers, and lakes, was almost impassible, especially for tanks, and the conditions for the conduct of combat operations approximated an actual combat situation. In addition, the two-sided nature of the exercise gave the troops the opportunity to obtain the experience of battles with a "real enemy" in the offense as well as in the defense.

In accordance with the statement of the Bundeswehr command, the main goal of the exercise was to check the combat capabilities of the I ak [Army Corps] and the "North" territorial command in cooperation with troops of the United

States, the Netherlands, and Denmark in organizing defensive and containment operations and an offensive to destroy the "enemy." In the course of the exercise, as the foreign press reported, the combat readiness of the units and large units was checked with the transition from a peacetime to a wartime status. Also worked out were the bringing of units up to strength and their movement out to the areas for their operational employment, the organization and conduct of defensive and offensive combat operations with the employment of conventional weapons, the assault crossing of water obstacles, the organization and landing of a big amphibious and airborne assault, the organization of coordination between the ground forces and tactical aviation, the working out of air defense and logistics, and the improvement of forms and methods for the secret control of troops.

Actually involved on the exercise were the 1st Motorized Infantry and 3d Tank Divisions of I Army Corps, the 27th Airborne Brigade, a portion of the FRG "Hart" territorial command, the 3d Brigade of the U.S. 2d Armored Division, the 41st Tank Brigade of the Netherlands, and subunits of the Danish ground forces. Occupied altogether were 60,000 men (including 5,000 reservists of the Bundeswehr); 2,700 tracked and 1,600 wheeled vehicles, and 150 helicopters. Operating on the side of the "Reds" were the FRG 3d Tank Division, the 41st Dutch Tank Brigade, and subunits of the Danish ground forces, and on the side of the "Blues"--the FRG 1st Motorized Infantry Division and 27th Airborne Brigade and the 3d Brigade of the U.S. 2d Armored Division. Air support of the sides' combat operations was provided by air units of the 2d Joint Tactical Air Command. Overall direction of the exercise was accomplished by the commander of the I sk, General von Zenger und Etterlein (now commander of the NATO combined armed forces in the Central European TVD [theater of military operations]).

The basis of the concept for "Hart Faust" (Figure 1), just as of the majority of exercises of combined and national armed forces of the NATO member countries, was a stereotyped version in accordance with which the "Reds" (troops of the Warsaw Pact countries) increase the activity of preparations for war, concentrate large ground force formations in the border areas under the guise of exercises and then, right behind air strikes, "violate" the state border of the FRG and, having numerical superiority in conventional weapons, develop the attack with the goal of breaking through the forward defensive position and destroying the "enemy" main body. Simultaneously, they land an airborne assault north of the Hunte-Bms Canal to support operations of a big amphibious force which is to launch a flanking strike against the "Blue" main body.

The "Blues" (NATO troops), in connection with the inevitable threat of initiation of military operations, hastily convert the large units and units from peacetime to wartime status, move covering units up to the border zone, and the main body of the first echelon--to the forward defensive position. Then, to repel a strike in the flank they regroup forces and, with the commitment of the reserves, launch a counteroffensive, throwing the "Reds" back to the north and restoring the situation.

This concept indicates once again that the command of the VMO and the NATO bloc as a whole are using any opportunity to declare the aggressiveness of the Warsaw Pact countries tendentiously and to stress the defensive nature of their own measures.

The active phase of the exercise was preceded by the implementation of a large complex of preparatory measures. Primary attention was devoted to the combat training of the large units and units of the Bundeswehr I Army Corps. In particular, it was conducted especially intensively in subunits of the signal and engineer units. Problems in the deployment of communications centers and maintenance of stable communications under conditions of "enemy" active radio countermeasures and improvement of measures for the secret control of troops were solved on special exercises. On the lessons with the engineer troops, an important place was allotted to the practical solution of problems in laying crossings over water barriers. Instructional conferences with command personnel and the umpire apparatus took place just before the exercise.

The active phase of exercise "Hart Faust" took place in three stages. In the course of the first stage troops and headquarters were converted from a peacetime to wartime status for a period of three days prior to the start of combat operations (14-16 September). There was an actual call-up of reservists who arrived to bring the units and large units of the I Army Corps up to strength and reloading reserves and the corps depot stocks were replenished. The areas of forthcoming combat operations were intensively reconnoitered by subunit and unit commanders. In this same period, the troops moved out to their areas of operational employment. The covering units were the first to move out to the border areas, and the corps main body created a defense on a forward defensive position which ran along the Weser River. The "Reds" occupied the initial troop dispositions for the attack as well as for the dropping and landing of the airborne and amphibious assaults. Wheeled equipment moved out to the departure areas under its own power while heavy tracked equipment was transported by railroad. On the night of 16-17 September, the troops of both sides occupied the initial dispositions in accordance with the concept of the exercise.

In the course of the second stage (17-19 September) the "Reds" worked out the conduct of offensive operations and the landing of the airborne and amphibious assaults while the "Blues" worked out containing and defensive operations.

In the third stage (20-21 September) the "Blues" conducted offensive operations and the "Reds"--defensive operations.

The playing of combat operations began on 17 September. Right behind air strikes the "Reds" violated the FRG state boundary and launched an attack to seize the forward position. At the same time, they landed an airborne assault in the area east of Emden (Figure 1) (not reproduced) which, seizing a bridgehead, was to support the landing of an amphibious assault which had approached in the area of the cities of Emden and Wilhelmshaven. It was

envisioned that the "Reds" would achieve the destruction of the "enemy" main body by a concentrated strike from the north and east. Especially heavy battles were initiated in the covering zone. The "Blues," conducting active containment operations, held the attack of the "Reds" in cooperation with tactical aviation, and did not give them the opportunity to reach the forward defensive position from the march and capture it. As the West German press stresses, the combat formation of the 1 Army Corps was organized in two echelons. Here, the first echelon was substantially reinforced and included up to two divisions with reinforcing weapons. Considerable forces were detailed as covering units--up to two brigades reinforced with artillery and combat engineer subunits.

Helicopter gunships and tactical air airplanes were widely used in the covering zone to combat tanks. During 18-19 September, the "Blues" continued active battles to retain the forward defensive position.

Certain success was noted for the "Red's" assault forces. Not encountering strong, organized "enemy" resistance, by the end of 18 September they reached the line of the cities of Meppen and Wardenburg. Initially, combat operations with the assault forces were conducted by a so-called holding group created primarily of territorial troops. On the following day, the "Blues" executed the regrouping of forces, committed a part of the reserve forces, and stopped the attack of the "Red's" assault force on the line of the Mittelland Canal. By the end of 19 September, they also continued to hold the forward defensive position firmly.

After completion of the regrouping, on 20 September the "Blues" committed up to two divisions from the reserve and, with the active support of tactical air and helicopter gunships, launched a decisive attack toward the north and, by the end of the day on 21 September, reached the North Sea coast.

In the attack, the divisions operated in a zone of 30-40 kilometers and brigades--10-15 kilometers. The average rate of attack was up to 20 kilometers per day.

As noted by the Western press, in the course of exercise "Hart Faust" great attention was devoted to working out problems in the coordination of the ground forces with tactical aviation which was part of the combined NATO air forces in the Central European TVD which, during this period, conducted an exercise under the code name "Cold Fire-79." About 700 aircraft of various types, which provided close air support in groups of 6-12 aircraft each, were in operation in the interests of the ground force large units and units of both sides. As West German military specialists note, more than 80 aircraft sorties per day were accomplished. Great attention was also devoted to the organization and conduct of the air defense of both sides, the breakthrough of which by airplanes was accomplished primarily at low (150-500 meters) and lowest possible (50-70 meters) altitudes with the simultaneous execution of active and passive jamming.

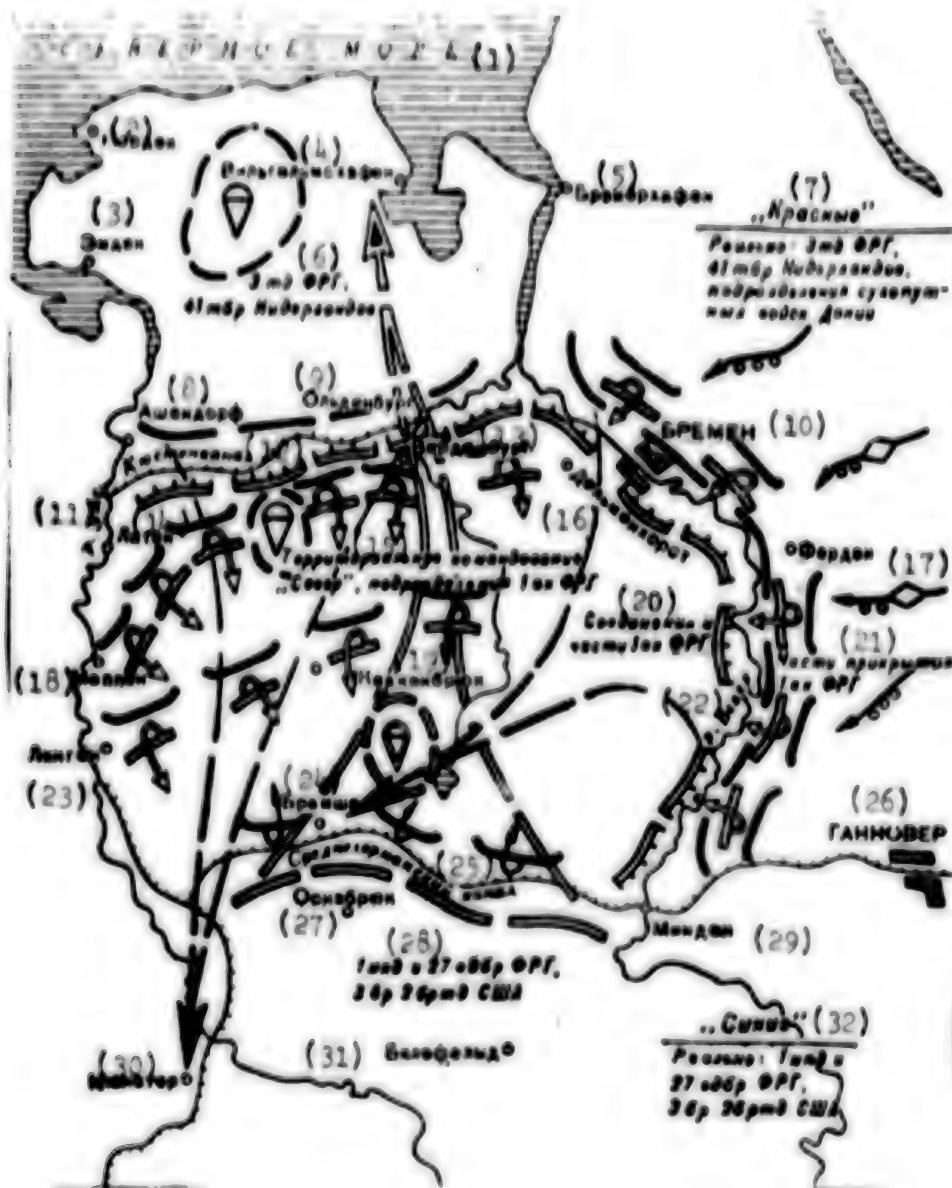


Figure 1. Concept and Course of Exercise.

Key:

1. North Sea
2. Norden
3. Emden
4. Wilhelmshaven
5. Bremerhaven
6. 34 Tank Division, 41st Netherlands Tank Brigade
7. "Reds": Actually--3d FRG Tank Division, 41st Netherlands Tank Brigade, subunits of Danish ground forces

[Key continued on following page]

8. Achendorf
9. Oldenburg
10. Bremen
11. Ems River
12. Hunte-Ems canal
13. Wardenburg
14. Laten
15. Territorial command "North," subunits of I Army Corps, FRG
16. Delmenhorst
17. Verden
18. Meppen
19. Quakenbrück
20. Large units and units of FRG I Army Corps
21. Covering units, FRG I Army Corps
22. Weser River
23. Lingen
24. Bramsche
25. Mittelland Canal
26. Hannover
27. Osnabrück
28. FRG 1st Motorized Infantry Division and 27th Airborne Brigade
U.S. 3d Brigade, 2d Armored Division
29. Minden
30. Münster
31. Bielefeld
32. "Blues": Actually--1st Motorized Infantry Division and 27th
Airborne Brigade, FRG; 3d Brigade, 2d U.S. Armored Division

On the exercise, great attention was devoted to problems of technical and material support for the uninterrupted supplying of the troops with ammunition, fuels and lubricants, and so forth. Thus, for example, 6 million liters of fuel were supplied from dumps and over pipelines for tanks, armored personnel carriers, motor vehicles, helicopters, and other equipment for the period of the exercise. The medical service received certain practice: two reserve hospitals were additionally deployed. Helicopters and special medical trains were widely employed for the evacuation of "wounded." In addition, as noted by the foreign press, an important place was devoted in the course of the exercise to the practical accomplishment of combat missions by territorial troops.

In the opinion of the West German command, exercise "Hart Faust" proceeded in an organized and dynamic manner and large-unit and unit commanders controlled their troops confidently. The personnel received practice in the conduct of combat operations and the execution of long marches under difficult situations and terrain conditions (individual tank subunits covered more than 600 kilometers, and rear services subunits--about 1,200 kilometers).

The two-sided exercise of the FRG I Army Corps which was conducted shows that the Bundeswehr command is devoting serious attention to the field training of the troops, the basic goal of which is the training of ground force large units and units for an aggressive war against the Soviet Union and other countries of the socialist commonwealth.

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NATO: SOVIET VIEW OF HELICOPTER TACTICS

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 3, Mar 80 signed to press 7 Mar 80 pp 39-43

[Article by Col G. Bryukhovskiy: "Helicopter Aerial Combat"]

[Text] A significant place is allotted to helicopters in the plans for a further buildup of capabilities of the general purpose forces of the countries which are participating in the aggressive NATO bloc, especially of the United States. Having a number of substantial advantages over other aircraft, helicopters have become widely employed in all the services of these states' armed forces. The most varied combat missions are assigned to the helicopter units and subunits: close air support of the ground forces on the battlefield, landing assault forces, transporting troops and equipment, combating submarines and tanks, aerial reconnaissance, and so forth. On the strength of this, a considerable number of helicopters of various classes have been developed and adopted in the inventory in the NATO countries. The principal ones are: helicopter gunships, transport-assault, antisubmarine warfare, reconnaissance, and multipurpose.

According to the views of the military leadership of the United States and her allies, helicopters will be widely employed in combat operations in a future war. However, many foreign experts believe that the mass employment of helicopters under contemporary conditions, especially in the European TVD [theater of military operations], will lead to where the aerial battle of helicopters will become fully possible and, in some cases, even an inevitable phenomenon. Therefore, great attention is devoted abroad to the working out of tactics for the conduct of aerial combat by helicopters in various situations.

Studying the course of combat operations in the United States' aggressive war in Southeast Asia and in Israel's predatory wars in the Near East, foreign specialists came to the conclusion that the experience of these wars provides almost nothing for working out the tactics of helicopter aerial battle. At the same time, they believe that the armed helicopter is fully capable of destroying an enemy helicopter, and even an airplane.

Some views of specialists of the United States and other capitalist countries on problems of helicopter aerial combat are presented below.

The primary mission of helicopter gunships, according to the estimate of the American command, is the destruction and neutralization of enemy ground targets with the use of various weapons and covering and escorting helicopters which are accomplishing other missions as well as ground force units and subunits.

The manuals and other guidance documents stress that under contemporary conditions subunits of helicopter gunships must overcome the counteraction of enemy airplanes and helicopters during flight toward the target, its attack, and return to the landing site. Here, on all stages of the flight the crews are directed to employ defensive tactics and to direct all efforts toward the accomplishment of the primary combat mission. For this purpose, it is recommended that each of them constantly follow the aerial situation in order to detect the enemy at the greatest possible range and inform the others about this immediately and briefly. As a rule, the report should contain the following data: crew's call sign, composition of detected enemy helicopters or airplanes, direction and range to them, and nature of their actions.

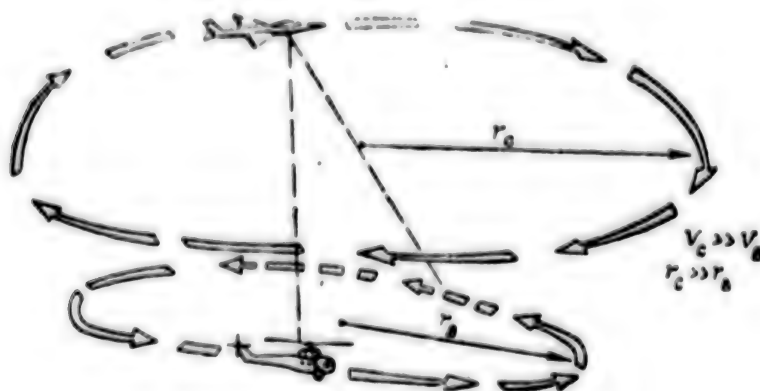


Figure 1. "Flight along a circle" when avoiding attack of enemy airplane.

It is stressed in the Western press that it is recommended that helicopter crews avoid battle with enemy airplanes (heli) if the accomplishment of the primary mission is not threatened. And in this case, they can enter into aerial combat only when their aerial cover by airplanes is lacking, ground air defense [AD] weapons cannot eliminate the threat of attack, there is numerical advantage or tactical superiority over the enemy, and there is no other way out.

The two most typical types of attacking aerial enemy in the tactics of defensive aerial combat of helicopter gunships are considered abroad to be: the armed helicopter (airplane) with low performance and tactical characteristics and airplanes with high characteristics.

The crew's battle with a helicopter (airplane) having low performance and tactical characteristics (close to the corresponding characteristics of their own aircraft) presumes the following sequence of actions: identifying the enemy, warning the other crews of this, occupying one's place in the combat formation for the conduct of battle which was established ahead of time, reporting to the ground control post the coordinates and nature of the aerial enemy's actions and requesting the support of ground AD weapons or tactical air, executing a maneuver (as secretly as possible) and occupying the attack position, attacking the enemy helicopter (airplane), restoring the combat formation if it has been disrupted, and continuing accomplishment of the primary mission.

In working out the tactics of helicopter aerial battle, foreign military specialists established that it is extremely important for their crews to know the armament of enemy helicopters (airplanes). They believe that if the latter are not armed with air-to-air guided missiles, then the friendly helicopter which has such missiles on board possesses a decisive advantage. In this case, attack from the direction of the rear hemisphere is considered as the most advantageous for launching missiles and tracking the target. Here, it is stressed that when it is impossible to come out in the rear hemisphere, the attack should be accomplished from the front hemisphere or at another aspect angle with the use of small-arms and cannon weapons.

If a helicopter pair engages one enemy helicopter (airplane), it is recommended that one of them accomplish the attack. At this time, the other should cover the attacker or swiftly occupy a more advantageous position to attack the enemy (when the first one does not succeed in shooting down the target). If the helicopter gunship subunit is accomplishing the mission of escorting unarmed aircraft, then all its efforts should be directed toward defeating enemy attacks against the crews which they are covering. The escorts must not leave those being covered before the enemy launches his attack. With the start of the aerial battle, the subunit must assume the combat formation which assures the most effective employment of weapons (for example, when employing homing missiles a "helicopter front" combat formation is considered most preferable in aerial combat) with the attackers destroyed or driven off.

In group as well as in single aerial combat, foreign specialists recommend first of all that all capabilities for camouflage be utilized. They believe that the success of helicopter aerial battle depends on the ability of the crews to detect the enemy in good time, conceal their maneuver, occupy the most advantageous position for the attack, and employ on-board weapons correctly.

In aerial battle with an enemy airplane which possesses high performance and tactical characteristics, it is recommended that the crew operate in the following manner: identify the enemy, warn the other crews, occupy combat formation, report the coordinates and nature of actions of the aerial enemy to the ground control post and request the support of ground AD weapons and tactical air, utilize cover and folds in the terrain for covert flight and to break up the enemy attack, return to territory occupied by friendly troops when it is impossible to accomplish the mission, concentrate at the assembly point, and be ready to continue accomplishment of the primary mission initially assigned.

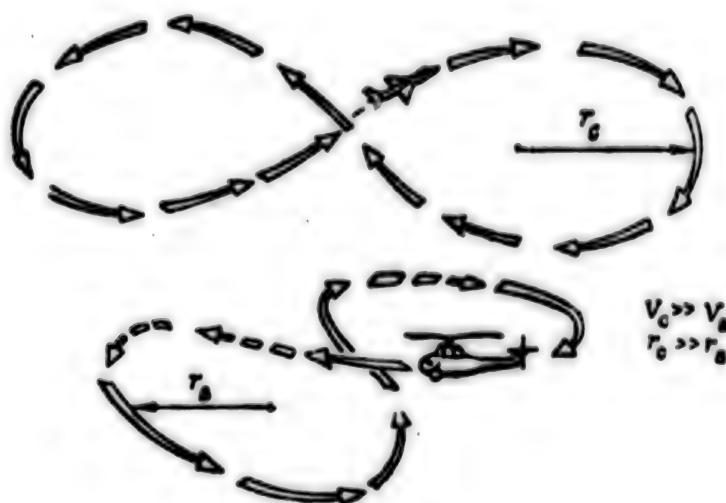


Figure 2. "Figure Eight" Maneuver when Avoiding Attack by Enemy Airplane.

For the correct selection of operating tactics, it is recommended that consideration be given to the fact that an increase in the speed of the airplanes is attained at the expense of a reduction in their maneuverability. In particular, a high-speed airplane has a considerably greater turning radius than a helicopter; therefore, the latter can be located within the banking turn being accomplished by the airplane which is attacking it.

The essence of the helicopter tactics in this case consists of piloting at the lowest possible altitudes and accomplishing various maneuvers in a horizontal plane, for example "flight along a circle" or "figure eight" as shown in Figures 1 and 2 (v_c and r_c --the flight speed and turning radius of the airplane, and v_b and r_b --the flight speed and turning radius of the helicopter) and Figure 3. When attacking an enemy fighter from the front hemisphere it is recommended that the helicopter crew employ a maneuver in a vertical plane, in particular "taking off beneath the line of fire" (Figure 4).

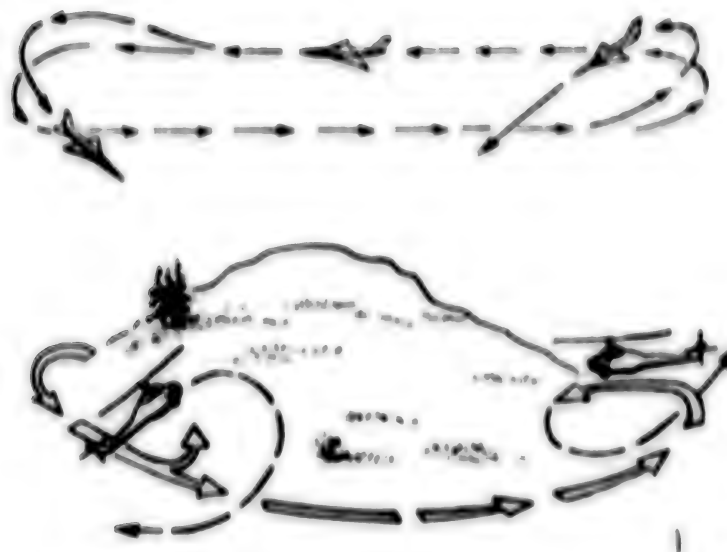


Figure 3. Accomplishment of Various Maneuvers when Avoiding Fighter Attacks.

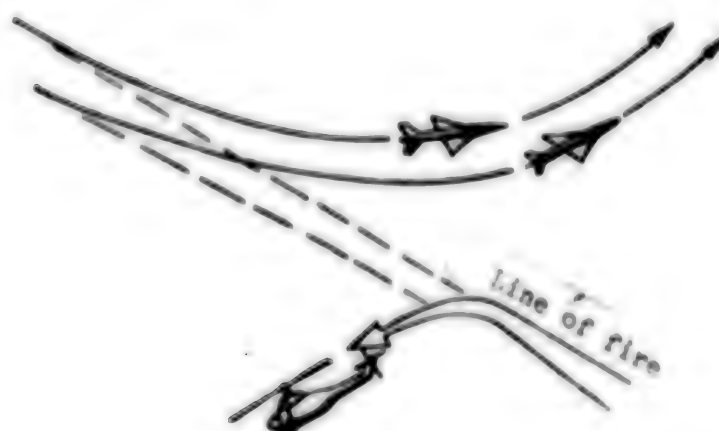


Figure 4. Maneuver "Taking Off Beneath the Line of Fire" (Descent) of Attacking Fighters.

By maneuvering, the helicopter pilot forces the attacking airplane to come out beyond the limits of visual detection of his helicopter and thereby can avoid attack. Such tactics grant time to find cover and concealment using folds in the terrain at the lowest possible altitude and, in some cases, even the possibility to occupy an advantageous position to employ on-board weapons.

Armed covering helicopters must maintain the assigned flight route in one combat formation with the escorted helicopters until the enemy launches the

attack. And with its start, several escort helicopters should deploy to meet him and open fire in such a way that the attacker flies through the zone of fire. After this, it is recommended that they occupy their places in the combat formation and accomplish the assigned combat mission, next defensive maneuver, or battle (depending on the enemy's actions).

Such are some of the propositions of the tactics for the conduct of aerial battle by helicopter gunships which have been published in the foreign press. According to the statement of foreign specialists, this problem has not been sufficiently studied and, therefore, broad studies in this direction are being conducted in the United States and other countries which are participating in the NATO bloc. Important significance is also attached to the study of the question of employing air-to-air guided missiles and other weapons by helicopters.

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U.S. NAVY: SOVIET REVIEW OF PILOT TRAINING

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 3, Mar 80 signed to press 7 Mar 80 pp 59-61

[Article by Col M. Panin: "Training Flight Personnel in Combat Training Squadrons of the U.S. Navy"]

[Text] The military-political leadership of the United States considers naval aviation to be an important means for the conduct of combat operations at sea and on land. As noted in the foreign press, it is in a high degree of combat readiness and capable of launching missile and bombing strikes (including nuclear) against ships, naval bases, and other enemy objectives; of participating in the seizure and retention of supremacy at sea and in the air in individual regions of a TVD [theater of military operations]; of conducting reconnaissance; of combating submarines; of supporting ground forces and forces of an amphibious assault; and of providing air cover for warship forces, amphibious assault forces, and convoys.

As stressed in the Western press, the accomplishment of these missions will depend to a considerable degree of the quality of training of the flight personnel. It is also reported that their training is conducted in two stages. The first stage is instruction in schools of the naval aviation training command (15 months).^{*} Then, before joining the naval combat squadrons, its graduates undergo training in the combat training squadrons of the fleets (replacement squadrons) for six months (second stage) where they are taught to fly in the airplanes (helicopters) of those types in which they will perform their service. Completing instruction in the combat training squadrons, the graduates are enrolled in the naval combat squadrons.

As evidenced in the foreign press, U.S. naval aviation contains 29 combat training squadrons (15 as part of the air forces of the Atlantic Fleet and 14 in the Pacific Fleet) which are part of uniform fleet air wings. Each of them has its own staff of instructors and teachers and the requisite training programs, courses of combat training, and simulators.

^{*} For greater detail on the naval aviation training command see ZARUBEZHNOYE VOYENNOYE OBOZRENIYE, No 9, 1977, pp 69-75--Editor.

Young crews and instructors undergo training in the combat training squadrons and new tactical procedures and methods for the employment of weapons are worked out. The retraining of flying and technical personnel of the fleet's combat squadrons on new equipment and restoration of the level of training of pilots and navigators who have a large gap in their flights (more than 12 months) takes place here.

In this article, the author examines the training of flight personnel in some of the fleet's combat training squadrons. The basic principles and methods of instruction are the same in them; however, in each of them specific tactical procedures and methods of employing weapons which are typical of the corresponding type of naval operation and specific type of airplane are worked out.

Thus, the main thing in training the crews of carrier-based strike aircraft is working out the launching of strikes against land and sea targets under simple and difficult weather conditions. The process of training them can be traced using the example of combat training squadrons VA42 and VA122.

According to reports in the American military press, squadron VA42 trains pilots and navigators of the A-6 medium strike aircraft for carrier aviation combat squadrons of the Atlantic Fleet (about 100 men per year). It is based at the Oceana Naval Air Station in Virginia.

The course, whose training program changes depending on the requirements of the time, new types of armament arriving in the units, and modifications of the airplanes, is intended for 27 weeks and consists of 500 hours of ground training and 60 hours of flight training (for pilots who have no previous flying in the A-6 strike aircraft, 120 hours).

Ground training includes a study of the airplane's construction, its engine, on-board systems, work on the simulator, and survival drills.

The flying program begins with introductory and familiarization flights. Then the squadron flies to a range in Yuma, Arizona. There 10 days are spent in working out bombing with an optical sight and flights in combat formations with the transition to complicated types of combat employment at night and under difficult weather conditions. After this, the crews return to Oceana and continue flights for the more profound mastery of navigation and weapons systems.

In the course of the training, great attention is devoted to the execution of procedures in evading attacks by fighters and landing on a mockup of a carrier deck which is a specially laid-out runway of the airfield with an arresting gear.

The concluding stage is working out landings on a carrier at sea.

As noted in the foreign press, the training of navigators presumes the study, primarily, of navigation-bombing equipment systems and their use in flight.

Here, special emphasis is placed on mastering the radar, bombing computer, and inertial and Doppler navigation systems. Flights are accomplished on special airplanes equipped with equipment of the A-6 strike aircraft. Main attention is devoted to launching strikes on unknown targets. Each sortie is preceded by prolonged preparation on the ground (12-20 hours) in the course of which maps and photos are studied and radar images of the target are simulated on the radar scope. The navigator's state of training is determined by a successfully accomplished flight over a route and bombing an unknown target on the first pass.

On the concluding stage of instruction, the navigators join with the pilots for joint flights in working out landings on a carrier.

There are about 15 combat-ready airplanes in squadron VA57. An average of 20 sorties are accomplished during a flight shift. The squadron's annual accrued flying time is more than 10,000 hours. The instructors have combat experience in the war in Vietnam.

Combat training squadron VA122 (Lemoore Naval Air Station, California) trains pilots for the A-7 light strike aircraft for carrier aviation of the Pacific Fleet. Along with working out the launching of strikes on land and sea targets, considerable attention is turned to training the pilots in the correct selection and use of antfighter maneuver. Flights (at least five) are accomplished at the Yuma range. Instructors on A-4 strike aircraft simulate "enemy" fighters.

Judging from materials in the Western press, in connection with the planned reequipping of the Marine air strike squadrons with aircraft for vertical or short takeoff and landing, the AV-8B, the question of training the flying personnel for this type of aircraft arose. Training of the pilots is accomplished in combat training squadron VMAT203 on AV-8A airplanes. Initially, the young pilots fly for one week in a helicopter to develop the skills in the vertical rise and hovering modes. Then, after 12 familiarization flights in a two-seater airplane they accomplish nine independent flights. Subsequently, the program calls for working out instrument flights and flights in combat formations. Helicopter pilots are not permitted to retrain in the AV-8A.

The U.S. naval command is devoting special attention to the training of flying personnel of fighter aviation because in the course of aerial battles in Vietnam, in its opinion, its following weak aspects were disclosed: incomplete knowledge of the enemy's combat capabilities, poor skill in employing weapons, and a lack of experience in conducting aerial battle.

To eliminate these shortcomings a school of combat employment of fighter weapons was organized on the basis of combat training fighter squadron VF121 (Miramar Air Naval Air Station, California). Its basic mission is training instructors for the combat fighter squadrons of the U.S. Navy in tactical actions and weapons employment. The school's instructors (15 men) fly in F-5 and T-38 trainer aircraft which are camouflaged as Soviet airplanes.

One or two of the best trained crews with their airplanes are detailed from each fighter squadron for instruction in the courses of this school. The program is intended for a month and envisions 90 hours of ground training and 45 hours of accrued flying time to work out elements in the tactics of aerial combat. Twenty-eight flights are accomplished on F-4 and F-14 fighters. Seven series of students of six crews each are trained here annually. Flights are conducted primarily on the Yuma range.

On the last stage of instruction the pilots accomplishing firings with actual guided rockets at maneuvering targets on the Point Mugu range (California). In addition, the program includes working out ensuring the cover of strike groups of strike aircraft en route.

Completing the course, the crews return to their combat squadrons and instruct the flight personnel in the school's program. The school's instructors also travel out to the combat squadrons where they participate in 80-90 training aerial battles, acting as the "enemy" in them. In the conduct of battle, they try to employ the tactical procedures of Soviet aviation which they know.

To improve the training of the operators who control the missiles on the F-4 and F-14 (navigators), an additional program exists which is intended for three weeks and consists of 60 hours of ground training. Here, special attention is devoted to studying the tactics of the probable enemy, effective opposition to him, and questions of electronic warfare.

Crews of the B-3A "Viking" carrier antisubmarine warfare (ASW) airplanes train in combat training ASW squadrons. One such squadron, VS41, is located at the North Island Naval Air Station in California. The course of instruction in it is intended for six months and consists of 650-725 hours of ground lessons and 55 flying hours. The annual output is about 70 pilots and 400 technicians.

The training of crews and technical personnel of ASW and multipurpose helicopters (SH-3 "Sky King" and SH-2 "Sea Sprite" respectively) is accomplished in combat training squadron HSI0. Helicopter pilots of the Marines, Air Force, and Ground Forces of the United States and her allies are trained here.

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NATO: SOVIET REVIEW OF NATO EXERCISE

Moscow ZARUBEZHNOYE VOYENNOYE OBOZRENIYE in Russian No 3, Mar 80 signed to press 7 Mar 80 pp 62-63

[Article by Capt 3d Rank V. Fomin: "NATO Combined Armed Forces Exercise 'Ocean Safari-79'"]

[Text] The military-political leadership of the North Atlantic bloc considers the Atlantic to be one of the main ocean theaters of war. It envisions the conduct of primarily active offensive operations in this region whose goal is failure of the enemy's deployment of strike groupings of surface forces and submarines in the North Atlantic and their destruction, ensuring the strategic transportation of reinforcement troops and combat equipment from the United States and Canada to Europe, conducting amphibious assault operations, and the protection of ocean and sea communications. In the opinion of Western military specialists, the spatial scope of the theater permits the effective use of all naval forces and weapons to include nuclear missile submarines and multipurpose aircraft carriers.

In speeding up their aggressive preparations, the NATO command is devoting special attention to the maintenance of the armed forces at a high stage of combat readiness, improving their ability, and working out various versions of war's initiation and the conduct of combat operations in its initial period. A large number of exercises and maneuvers are conducted annually in the Atlantic, the biggest of which were "Team Work" as well as exercises "Northern Wedding," and "Ocean Safari." Beginning with 1975, they have been planned and conducted in accordance with a single concept and against a common operational-strategic background of a series of autumn exercises and maneuvers of combined and national armed forces of the bloc's countries under the code name of "Autumn Forge."

A component part of the autumn exercises of 1979 was the exercise of the NATO OVS [combined armed forces] in the Atlantic, "Ocean Safari," which took place in the Eastern Atlantic and the Norwegian Sea from 24 September through 5 October. Involved in participation in it were the commands and staffs of combined and national armed forces in the Atlantic and Northern Europe TVD [theater of military operations], the NATO strike fleet, combined NATO naval forces in the Northern and Central Regions of the Eastern Atlantic, Northern

and Southern Norway, units and subunits of the air forces, and men and equipment of the combined NATO air defense (AD) in Europe.

As noted in the foreign press, up to 70 warships and auxiliary vessels were put into action including the permanent NATO naval force in the Atlantic and the permanent force of minesweepers in the zone of the English Channel, more than 200 strategic, tactical, land-based patrol, and reconnaissance aircraft and 17,000 men of the navies of the United States, Canada, Great Britain, the FRG, Norway, Denmark, the Netherlands, and Belgium. American multipurpose aircraft carriers did not participate in "Ocean Safari-79" for the first time in the practice of exercises of this type as their role was performed by the flagship of the NATO strike fleet in the Atlantic.

Judging from materials in the Western press, in the course of the exercise the following basic problems were worked out: conversion of the NATO OVS in the Eastern Atlantic and in the Northern European TVD from peacetime to war-time status; the formation of task forces and groups (including a strike fleet), their deployment in areas of intended combat employment; combating groupings of the "enemy" fleet to achieve superiority at sea; the search for and destruction of "enemy" submarines which have penetrated into the North-eastern Atlantic; ensuring strategic shipments of troops and military cargoes from the United States and Canada to Europe; and protection of sea lines of communication.

The exercise was directed by the supreme commander of the NATO OVS in the Atlantic, the American Admiral G. Train, through the commanders of NATO OVS in the Eastern Atlantic and in the Northern European TVD and the commanders of NATO forces in regions of the Atlantic and of the strike fleet while the operations of the forces at sea were controlled directly by the commanders of task forces and groups.

The forces on the exercise were divided into "Blues" (NATO OVS) and "Orange" ("enemy"). Operating on the side of the "Blues" were surface ships consisting of a strike fleet and zonal naval formations, submarines, strategic, tactical, and land-based patrol aircraft, and men and weapons of the Atlantic zone of the NATO combined AD system in Europe, and on the side of the "Orange" were nuclear and diesel submarines, surface ships consisting of ship strike groups, and individual tactical aviation units and subunits.

The first stage of the exercise saw the deployment of forces in the areas of their intended combat employment (on the Iceland ASW [antisubmarine warfare] line), the formation of ship ASW and strike forces, combating "enemy" groups of surface ships, and escorting convoys with military cargoes in Norwegian coastal waters. Special attention was devoted to working out the tactics for operations of maneuvering ASW forces in searching, tracking and destroying "enemy" submarines which had penetrated the Iceland ASW line. The basic tactical formations were ship hunter-killer groups which cooperated closely with the airplanes of land-based patrol aviation and the fixed system for long-range sonar observation.

The escorting of convoys in the coastal waters of Norway was provided by ships of the permanent NATO naval force in the Atlantic which operated in a single combat formation or as part of ship hunter-killer groups (two or three ships in each one) on threatened directions. It took place under conditions of mining danger and active opposition on the part of "enemy" submarines and aviation.

The following problems were solved on the second stage: the protection of sea lines of communication in the Eastern Atlantic and the oil and gas deposits in the North Sea; the formation and escorting of ocean convoys from the United States and the organization of all types of their combat support; combating groupings of the "enemy" fleet in the southern part of the Norwegian Sea and the northern part of the North Sea.

Operational screening of the main centers of sea communications was assigned to the ships of the strike fleet and to the forces and weapons of the Atlantic zone of the combined NATO Alliance in Europe. ASW protection of the areas for the assembly and formation of convoys was accomplished by ship hunter-killer groups, and on transit routes--by submarines, a carrier hunter-killer group (the assault helicopter carrier "Hermes" with escort ships), and airplanes of land-based patrol aviation. The destruction of "enemy" ship groupings was attained by the integrated use of fleet forces with the broad involvement of shore-based strike aviation. Strikes against surface ships were inflicted by pairs of airplanes which operated as part of air groups of four to six airplanes each. Air operations were worked out under conditions where electronic warfare equipment was widely employed.

Protection of the oil and gas deposits in the North Sea was accomplished in a single complex of missions to gain superiority at sea. The search for and destruction of "enemy" submarines were conducted by ship hunter-killer groups from the strike fleet and zonal naval forces.

Other problems were also worked out on the exercise: control of diverse forces of the fleet; their coordination with the shore-based strike aviation to launch strikes on "enemy" ship groupings which are coordinated for place and time; the conduct of reconnaissance; the organization of all types of protection of ships, ships forces, and convoys when leaving bases and on the sea crossing; and material-technical support of ships at sea and in anchorages. Just as on other exercises of recent years, special attention was devoted to the use of electronic warfare equipment to destroy the enemy's system of command, control, and communication and to suppress his radars for the detection of surface and aerial targets and for fire control.

The exercise "Ocean Safari-79" which was conducted and its general direction and course indicate that such demonstrations of the aggressive NATO bloc's power have a clearly expressed provocative nature since their goal is aggravation of the international situation and whipping up a war psychosis.

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UNITED STATES MILITARISTIC POLICIES THREATEN PEACE

Moscow MIROVAYA * ZHURNAL I MEZHDUNARODNYYE OTNOSHENIYA in Russian No 6, Jun 80 signed to press 30 May 80 pp 25-37

[Article by V. Vasyutovich: "The Militaristic Passion in the United States"]

[Excerpts] The events which took place at the turn of the decade aroused profound concern in all those who care deeply about the fate of peace, detente and disarmament. The U.S.-provoked complication of international affairs can quite justifiably be regarded as a dangerous relapse into cold war.

The peaceful policy of the USSR, which supports, along with the other socialist countries and all progressive people, the continued reorganization of international relations on the principles of peaceful coexistence, is encountering fierce opposition from the U.S. military-industrial complex and the United States' NATO allies. "The militaristic tendencies in U.S. policy," L. I. Brezhnev said when he was interviewed by a PRAVDA correspondent, "have recently also been reflected in the vigorous promotion of new long-range weapon programs, in the establishment of new military bases far from U.S. borders, including bases in the Middle East and the Indian Ocean region, and in the formation of the so-called 'fast reaction corps'--this instrument of the policy of military intervention."

In essence, U.S. ruling circles have embarked on the planned and uninterrupted augmentation of military spending. This was quite clearly attested to by the long-range (up to 1994) program, adopted in May 1978 at a NATO Council session in Washington, for broader militaristic preparations by the members of the bloc. The policy of a continued buildup of the military strength of the imperialist states was given new impetus after the publication of the draft U.S. defense budget for fiscal year 1981.

I

This draft envisages record military spending.

It should be noted that this escalation is taking place at a time when the Defense Department is actually unable to completely "assimilate" not only

current appropriations, but even those previously allocated. It has at its disposal "unused funds" in the form of so-called "unplaced securities" totaling approximately 85 billion dollars, accumulated over the last 5 years.³

Nonetheless, the accelerated growth of military expenditures is continuing under the pressure of the military-industrial complex. In May 1980 the U.S. Congress approved a rise in military appropriations for fiscal year 1981 to 173.4 billion dollars.

American officials and the bourgeois mass media are trying to justify this exceedingly obvious escalation of militaristic preparations with the aid of the totally false and outdated "argument" of the "mounting Soviet threat" and hypocritical statements about the need to "safeguard vitally important U.S. interests" in various parts of the world, primarily the countries rich in oil and raw materials. A prominent place has been assigned to the events in Afghanistan, which was the object of a far-reaching conspiracy on the part of international reaction and armed imperialist outside intervention. Distorting the facts of these events, the Carter Administration is demagogically exploiting its personally invented "Afghan question," not only to push the new military budget through Congress but also to justify U.S. Government actions aimed at undermining detente and obstructing economic, cultural and scientific contacts with the USSR and other socialist countries.

The line of the accelerated buildup of military strength was actually adopted in the United States long before the Afghan events, just a few months after Carter's election to the presidency. The general features of this line had already been precisely defined by 1977, in a special National Security Council document--"Presidential Memorandum No 10." As for the basic premises of the draft U.S. defense budget for fiscal year 1981, their general features became common knowledge by approximately mid-1979. From the very beginning, this previously planned rise in military spending was depicted by the administration as a kind of inevitable "redemption" of the military-industrial complex. The latter, however, was not satisfied with this and persisted in soliciting even more pronounced arms escalation: Its representatives found the 4-6 percent planned rate of increase in defense appropriations inadequate and demanded an increase of 8 percent a year.

On the whole, as a result of the current revision of military construction plans, the total cost of the entire U.S. military program for fiscal years 1981-1985 will exceed 800 billion dollars (expenditures), which will be approximately 130 billion dollars (in constant prices) in excess of the actual cost of the military program for fiscal years 1976-1980. These 130 billion dollars represent a sum which is practically equivalent to the average annual U.S. military budget in the second half of the 1970's.

This tendency to continuously escalate military spending is due to several factors. Above all, it is due to the shift in the Carter Administration's

3. See BUSINESS WEEK, 4 February 1980, p 84.

foreign policy line toward the exacerbation of international tension, the intention to use military force as the major means of solving international problems, and the attempts to attain clear superiority in the military sphere by the mid-1980's and to strengthen the position of American imperialism in strategically important regions. These factors clearly display nostalgia for the "good old" days when the United States had more opportunity to impose its will on other countries and to intervene directly in their domestic affairs.

This outlook was one of the main contributing factors in the birth of the notorious idea of "broader U.S. strategic responsibility," which has been called the "Carter Doctrine." This means insistence on direct American intervention far beyond the boundaries of the NATO zone, primarily in the Near and Middle East, where more than two-thirds of the capitalist world's oil is concentrated. The "Carter Doctrine" arbitrarily calls this region a "sphere of U.S. vital interests," for the "protection" of which the American President is prepared, in his words, to use any means necessary, including military force.

Hoping to reinforce its access to strategic resources by any means at its disposal, the United States is making vigorous military preparations, particularly in the Persian Gulf zone and Indian Ocean.

A "fast reaction corps" is quickly being put together to perform police functions. It will be composed of around 110,000 men, 1,000 fighters and bombers and 700 transport planes and ships. The cost of this is expected to range from 8 to 10 billion dollars, including up to 1.5 billion from the 1981 budget. The corps will be expected to supplement and augment existing, and far from negligible, opportunities for American military intervention abroad. Along with Marine units, mobile infantry and airborne troops, the size of the total contingent of forces for armed battle in "hot spots" will be around 600,000 men. Its maintenance will take from 20 to 25 percent of the entire Defense Department budget.

The intensification of the arms race in the United States is largely due to, in addition to reasons of a political nature, the implementation of programs in the last decade for the production of new weapon systems. They were intended to provide for a considerable buildup in military strength through the mass updating of all basic components of the American arsenal.

From this standpoint, the entire postwar arms race in the United States can conditionally be divided into three major stages:

From the mid-1940's to the end of the 1950's, when atomic and thermonuclear weapons were developed and the U.S. Armed Forces were equipped with them;

From the end of the 1950's to the mid-1970's, when fundamentally new means of delivering nuclear weapons began to be used--the first and second generations of land- and sea-based intercontinental ballistic missiles;

Finally, the present, third stage of mass rearming and the modernization of the military arsenal, marked by the use of such means of delivering nuclear weapons as cruise missiles, the development and production of a third generation of strategic arms (the MX, Trident-1 and Trident-2 missiles), the birth of the neutron bomb and the improvement of conventional weapons.

One of the main features of the new military budget is the function of financing military preparations, which are being carried out at a speed exceeding overall economic development. This is increasing both the absolute and the relative amounts of U.S. military spending. This was concretely reflected in the rise of the proportion accounted for by military expenditures in the GNP to 5.4 percent in fiscal year 1981 (in comparison to 5.1 percent in 1979) and in the federal budget to 24.5 percent in fiscal year 1981, and according to estimates, to more than 25 percent in fiscal year 1985, which will be approximately 1.5 percent higher than the 1980 level. In the event of another economic recession, the possibility of which is being widely discussed in the United States, these indicators will naturally be even higher.

From the economic standpoint, the excessive rise in absolute and, in part, relative amounts of military spending and the rate of its increase, as envisaged in the draft budget for fiscal year 1981, testifies that extensive factors have retained their significance in the expansion of military preparations—that is, the buildup of military strength is being accomplished largely through the quantitative growth of material and financial resources. The structural reorganization and modernization of the production system of military industries and their preparation for the manufacture of qualitatively new and more complex weapon systems are being accompanied, understandably, by changes in production technology and costly scientific and technical projects, which require huge additional investments.

However, in contrast to the 1945-1965 period, when there was much construction of new military enterprises and employment figures rose rapidly, factors of an intensive nature are now having the deciding effect on arms race escalation.

Along with the increase in absolute military spending and the rise in the rate of its increase, various measures are being taken by the U.S. Government to enhance the effectiveness of military preparations. The qualitative improvement of resources used in military production, the augmentation of labor productivity, the more efficient use of budget funds and the extensive use of modern programming methods and cost analysis are being employed by military planning agencies to solve a fairly complex problem—to effect a buildup in military strength in the next few years which will exceed the rate of increase in military spending.

One of the main objectives stipulated in the draft federal budget for fiscal year 1981 is the enhancement of the effectiveness of military spending "by means of stronger competition in the purchasing sphere, the

reorganization of the supply system and the more efficient use of civilian personnel."⁷ By taking these steps, the Pentagon hopes to heighten the fighting efficiency of U.S. and NATO armed forces 20-25 percent between 1980 and 1984, with an increase of 14-15 percent in real expenditures. Under the influence of military-industrial monopolies and militaristic circles, the slogan of "bigger and faster at any price" is achieving prominence--that is, a situation is taking shape which, in many respects, is similar to the state of affairs in the 1950's and the first half of the 1960's, preceding the American aggression in Vietn.

The administration's policy line of escalating the arms race is being opposed by sober-minded politicians in the nation. President Carter's policy has been criticized, in particular, by Senator E. Kennedy, who has condemned the practice of the unlimited financing of expenditures on the development and production of weapons of mass destruction. In his opinion, Carter's policy is colored by the temporary requirements of the present election campaign and essentially ignores the need to solve such urgent socioeconomic problems as inflation, unemployment and the crisis of the dollar. According to TIME magazine, "many critics of the U.S. Government's military policy say that a nation in which 25 million people are categorized as living below the official poverty level can hardly allow itself this kind of colossal increase in militaristic spending." The increase in spending is accompanied by cuts in social programs. The funds for them will be cut 2.6 billion dollars this year and 17.2 billion in the next fiscal year.

II

The draft U.S. defense budget for fiscal year 1981 testifies not only to a sharp increase in the dimensions of militaristic preparations, but also to some changes in their structure. According to U.S. Secretary of Defense H. Brown's instructions, the central link in the entire system of planned measures is the reinforcement of the fighting efficiency of all-purpose and strategic forces, the heightening of their mobility and the enhancement of possibilities for their rapid transfer to regions of possible conflict.

Under the slogan of "modernization and upgrading," Washington is actually implementing the biggest program in the last 10-15 years for the buildup of NATO's nuclear missile potential. This program, which will cost just the United States 4 billion dollars, is aimed at the partial replacement of the American "nuclear umbrella" over Western Europe with Western European forces, but under American control. This replacement is dictated by the essentially impracticable intention to restrict potential strategic nuclear conflicts exclusively to the boundaries of the Western European theater of combat, to deflect probable retaliatory strikes from U.S. territory and to guarantee NATO overall military superiority to the Warsaw Pact countries.

Priority is being assigned to the further development of strategic nuclear missiles. Appropriations for this in fiscal year 1981 will be around

7. "The Budget of the United States Government. Fiscal Year 1981," Wash., 1980, p 90.

12 billion dollars, or 1 billion more than in 1980. It should be noted that these figures refer only to direct expenditures on the maintenance and technical equipping of strategic forces, which will amount, according to the estimates of the Brookings Institution, to approximately half of the expense of this program. The other half will be financed through such budget items as military research and development, intelligence and communications, military preparations, various types of personnel services and construction. As a result, the proportion accounted for by the "strategic forces" program in the U.S. military budget rises from 8-10 percent to 16-20 percent or even more.

The buildup of strategic nuclear missile forces, which is obviously contrary to the very spirit of the SALT I agreement and the SALT II Treaty, will primarily be accomplished through qualitative improvement, the replacement of outdated systems and the adoption of more effective ones, primarily offensive nuclear missiles, which absorb up to 90 percent of annual appropriations for strategic forces. The main emphasis here is on reducing the vulnerability, increasing the mobility and viability, and enhancing the reliability and destructive capability of each component of the strategic "triad." Judging by the draft budget for fiscal year 1981, the buildup of strategic strength will be accomplished in the following ways.

In the first place, it will be accomplished through the accelerated modernization of land-based strategic forces and the implementation of the program for the development of the MX ICBM system. President Carter has made a decision regarding the full deployment of 200 such missiles by fiscal year 1989.

In the second place, the buildup of strategic nuclear missile strength will be accomplished through the reinforcement and improvement of the maritime component of these forces.

In the third place, energetic steps have been taken to strengthen the airborne component of strategic forces by developing and producing cruise missiles. The series production of air-based cruise missiles is to begin in fiscal years 1980 and 1981.

In addition to strategic forces, all-purpose forces are also being reinforced.

It is primarily in these ways that the fighting efficiency of regular armed units is being heightened. Their total number was set at 2.1 million for fiscal year 1981, along with 900,000 reserve servicemen and around 1 million civilian employees of the Defense Department. The total number of servicemen abroad will be 458,000 in fiscal year 1981, not counting 30,000 civilian employees.

According to Secretary of Defense H. Brown's report, a considerable portion of the increase in military expenditures is earmarked for the American contingent of NATO forces. In the 1981 fiscal year, 20,000 U.S. servicemen

will be stationed in Western Europe, not counting 61,000 on naval ships in the Mediterranean. The plans for increasing the fighting efficiency of U.S. armed forces in Western Europe assign priority to the provision of these forces with new multipurpose F-15 and F-16 aircraft and A-10 planes designed for combat against tanks and various types of artillery and missiles. Large quantities of American ammunition and equipment are still being accumulated in Western Europe in addition to existing stocks, which can equip five more army divisions.

Large sums are being allocated for the acquisition of missile aviation equipment in fiscal year 1981 (including 466 planes)¹⁰--around 21 billion dollars, or more than half of the total cost of Defense Department purchases. Approximately 5.7 billion is being allocated for the acquisition of armored equipment and artillery rifles, and 569 XM-1 tanks for 1.1 billion dollars. The report by Secretary of Defense H. Brown contained a proposal to broaden the capacities of the armored tank industry, which will make it possible, in the event of mobilization, to increase the production of XM-1 tanks to 150 units a month--that is, to triple the 1981 level. There will be an increase in purchases of such types of weapons as the XM-2 infantry combat vehicle, the M109 A2 self-propelled gun mount, the M198 howitzer and others.

Besides this, the Carter Administration has decided to expedite the development of new types of ships. Around 35 billion dollars will be spent in fiscal years 1981-1985 on the construction of 97 naval ships and vessels although previous plans envisaged the construction of only 67. This "increment" is largely a result of the plans to equip the "fast reaction corps" with a large number of landing ships and auxiliary vessels. A large portion of this sum will be invested in the construction of small, and therefore less expensive, ships, including the development of a new frigate and a nuclear torpedo submarine. In all, 6.1 billion dollars will be allocated for the purchase of new ships and vessels in fiscal year 1981.

Military planning agencies in the United States are paying more attention to the need to heighten the mobility of armed units. In the coming fiscal year, 2.3 billion dollars will be allocated for the program pertaining to "forces for the transfer of troops by air and sea." According to projected figures, by 1982 the United States will be able to double the number of its land divisions in Western Europe within 10 days if necessary.

Naturally, the escalation of the arms race and the creation of increasingly complex and destructive weapons necessitate a constant increase in expenditures. In fiscal year 1981 the financing of military research and development will cost, according to the draft budget, 14 billion dollars, which exceeds the 1980 level by 18.6 percent in current prices and approximately 10 percent in constant prices. Most of the increase is to be used in the development of a technological base for military research and engineering, and the financing of projects in the development of laser, space, chemical

10. AVIATION WEEK AND SPACE TECHNOLOGY, 4 February 1980, p. 14.

and other means of warfare. The United States has spent around 2 billion dollars on laser weapons alone in recent years and intends to spend more than 200 million for this purpose in 1980. According to reports in the American press, the Pentagon is reconsidering neutron bomb production after being forced by world public pressure to shelve this production 2 years ago. Serious concern has been aroused by reports of Pentagon plans to deploy ballistic nuclear missiles in orbit near the earth in violation of international obligations taken on by the United States. According to AVIATION WEEK AND SPACE TECHNOLOGY magazine, the U.S. Department of Defense is investigating the possibility of putting Minuteman-2 missiles in orbit or launching a large unmanned Minuteman-3 facility. According to a Pentagon announcement, the United States is working on a program for the development of a new antimissile defense system, which could violate the 1972 Soviet-U.S. agreement on the limitation of missile defense systems. These and other steps are being justified by references to the nonexistent "Soviet military threat" and the need for the United States to "regain the strategic initiative."

The intensification of the arms race, reinforced by the unprecedented increase in military spending, the freezing of the SALT II Treaty ratification process in the Senate, the declaration of the adventuristic "Carter Doctrine" and the wave of frenzied anti-Soviet hysteria--all of these and many other factors irrefutably testify to desperate attempts on the part of more reactionary circles and the U.S. military-industrial complex to reverse the course of history and resurrect the cold war.

Mankind has paid too high a price for American imperialism's claims to world hegemony and the role of "world policeman." Just between 1945 and 1975 there were a total of around 470 local wars and conflicts in the world. In the overwhelming majority of cases, they were started, provoked or encouraged by Washington and its allies. In these wars and conflicts, the United States threatened to use nuclear weapons 19 times.¹¹

The present American program of building up the arsenal of nuclear missiles and conventional weapons represents a direct challenge to peace and public security. "This aggressiveness can only be restrained," L. I. Brezhnev said, "by the power and intelligent policy of peaceful states and the determination of people to undermine the dangerous plans of the contenders for world supremacy." The Soviet policy of peaceful coexistence by states with differing social systems and the struggle for peace, disarmament and international detente represent the only possible alternative to the dangerous plans to push mankind into a worldwide thermonuclear catastrophe.

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11. LE MONDE DIPLOMATIQUE, March 1979, p 3.

DISARMAMENT: TROOP WITHDRAWAL FROM EAST GERMANY DISCUSSED

Moscow NOVOSTI DAILY REVIEW in English 1 Aug 80 pp 1-4

[Interview with Lt-Gen Nikolai Chervov by Vasily Morozov, NOVOSTI's special correspondent, at the Soviet Army's General Headquarters, date not given]

[Text] This is an interview given to NOVOSTI's special correspondent Vasily Morozov by Lt-Gen Nikolai Chervov at the Soviet Army's General Headquarters in connection with the TASS report on the ahead-of-schedule completion of the withdrawal of 20,000 Soviet troops, 1,000 tanks and other military hardware from East Germany.

Question: The Soviet initiative on a unilateral reduction of the Soviet military contingent quartered in East Germany produced different comments in the West. There was even an allegation that the Soviet pullout was just "a symbolic gesture." Now that the withdrawal of 20,000 Soviet troops is complete, will you assess the significance of the Soviet move?

Answer: It should be noted, first of all, that the most important problem on which peace in Europe depends is that of military detente and disarmament on the continent. In Warsaw the socialist countries stated that there would be no insurmountable obstacle in the search for practical solutions aimed at ensuring military detente in Europe, if both sides took a constructive stand.

Having decided after consultations with the other Warsaw Pact member-countries to unilaterally withdraw a large contingent of its troops from East Germany, the Soviet Union thus showed its genuine concern about the need to lower the level of military confrontation in Central Europe. Having completed the withdrawal of the entire contingent ahead of schedule, it thereby made a substantial contribution to the relaxation of military tension in Europe. The socialist countries demonstrated to the world once again that they never sought and would never seek to achieve military superiority. They have always urged the other side to ensure military parity at a lower level and lessen and end military confrontation in Europe.

The peace-loving public and many political and government leaders, including those in capitalist countries, hail the Soviet initiative as a constructive effort aimed at breaking the deadlock which has stalled the mutual and balanced force reduction talks in Vienna.

In vivid contrast was the reaction of the United States and some of its allies. In a bid to maintain tension and the arms race, they did everything to hush up the Soviet Union's unilateral move or present it as a "symbolic propaganda ploy."

It would be appropriate to recall here that whenever the participants in the Vienna talks discuss a US troop pullout from Central Europe, the Western side claims that even the withdrawal of 13,000 American officers and men would be a great contribution to force reductions. It is clear, therefore, that the Soviet Union's unilateral withdrawal of 20,000 troops, 1,000 tanks and some other military hardware was a major step forward in easing military tension and not a propaganda stunt. The significance of the unilateral reduction of Soviet troops in Central Europe becomes still greater if we take into account the fact that combat-ready tank units have been withdrawn. It should be also noted that one need not be a military specialist to see the importance of the withdrawal of such a big tank force.

TASS reports have repeatedly emphasised that the forces withdrawn have been quartered in European Russia. Nevertheless, the Western press did everything to convince the world that the Soviet Union moved its troops to neighbouring Czechoslovakia and Poland and even left them in some "secret" zones in the German Democratic Republic.

To tar the favourable impression created by the Soviet Union's policy on disarmament, the Western press even claimed that since the Soviet troop pullout could not be verified, one may doubt whether it was carried out at all. These allegations are simple to refute. At all stages of the withdrawal the Soviet Union reported progress and invited representatives of the mass media to attend farewell ceremonies held by East Germans for the withdrawing Soviet troops, see with their own eyes the military hardware shipped to the USSR and talk to Soviet servicemen.

The NATO countries would meet the long-term interests of their own peoples if they properly appreciated the initiative of the socialist countries rather than to ignore it and followed the Soviet Union's example. Unfortunately, the West has failed to reciprocate and no progress has been made at the Vienna talks although they began more than six years ago.

Question: How can the withdrawal of Soviet troops from the territory of Central Europe be assessed in the context of confidence-building measures envisaged by the Final Act of the conference on security and cooperation?

Answer: There is a statement in the Final Act, adopted at the Helsinki conference, that all the states-participants in the conference "recognise the interest of all of them in efforts aimed at lessening military confrontation and promoting disarmament which are designed to complement political detente in Europe and to strengthen their security."

In the context of the given statement, the unilateral reduction of the contingent of Soviet troops, stationed on the territory of the GDR, is of principled significance. It testifies that the Soviet Union is, in practical deeds, showing an example in carrying out the Final Act. But, perhaps, the main thing is that these deeds strengthen the foundations of peace relations among states, indicate the way to the lessening of military confrontation in the heart of Europe, and build up an atmosphere of trust and mutual understanding.

The new concrete proposals, advanced by the leader of the Soviet state, Leonid Brezhnev, in his talks with the Chancellor of the Federal Republic of Germany, Helmut Schmidt, serve to strengthen peace and international security, curb the arms race, and deepen the process of detente on the European continent. They are directed towards the achievement of agreements on a wide range of issues, including those related to medium-range nuclear missiles and connected with the Vienna talks on a mutual reduction of armed forces and armaments in Central Europe.

The essence of these proposals are already known to the public at large. For instance, at the talks in Vienna on July 10, 1980, the Soviet delegation declared the preparedness, in the opening stage, to reduce Soviet troops in Central Europe by 20,000 men, and the American, by 13,000. It is not intended to include in the aforementioned reductions these 20,000 military servicemen, who were withdrawn unilaterally. In other words, the socialist countries are, in fact, accepting the Western side's proposal on reduction in the strength of US troops, whereas the reduction of Soviet servicemen will really reach 40,000.

This, of course, is a major constructive step on the part of the Soviet Union, calculated on breaking the deadlock in the Vienna talks arising from the NATO countries' negative stand, and ensuring the immediate achievement of agreement on lessening military confrontation in the centre of Europe.

The exchange, which recently took place at the proposal of the Warsaw Treaty member states, of figures on the strength of the armed forces of the immediate participants in the talks, as of January 1, 1980, also serves the purpose of speeding up these talks. This exchange of data has reaffirmed the existence of approximate parity in the strength of the armed forces of the Warsaw Treaty and NATO in the reduction area, which creates favourable preconditions for the conclusion of an agreement on the first stage.

Thus, on the part of the Soviet Union and the other socialist countries, there is no lack of initiatives, compromises and practical deeds showing their firm intentions of continuing efforts aimed at promoting political and military detente in Europe, implementing effective measures in curbing the arms race, and creating a healthier political climate in the world as a whole.

These goals, however, cannot be attained by the efforts of one side alone. It cannot be expected that the Soviet Union will continue effecting measures on a reduction of its troops unilaterally. The goodwill of the other side is needed, but, meanwhile, the NATO leaders go no further than talk and promise to give an additional impetus to the Vienna negotiations. They far more frequently stimulate a policy of armaments, and not one of disarmament. If the NATO countries are genuinely prepared to clear the Vienna talks logjam, they should adopt a positive attitude, a constructive approach towards the latest proposals of the socialist states, and, on their basis, start drawing up the text of a first-stage agreement.

The nations of Europe now stand at the threshold of the Madrid follow-up of the Helsinki conference. In this connection, the initiatives of the socialist countries, which are called upon to help gain real results in disarmament and in the removal of the danger of war, create most favourable conditions for this meeting to be held in a constructive atmosphere and be a success. Only one thing is necessary, namely, that the will and efforts of all the participating states be subordinated to preparedness to find agreed decisions on questions coming under discussion in each section of the Final Act.

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NON-PROLIFERATION TREATY: SOVIET COMMENTARY

Moscow NOVOSTI DAILY REVIEW in English 11 Aug 80 pp 1-3

[Commentary by V. Kortunov, political observer: "To Prevent Nuclear Catastrophe"]

[Text] Replying the other day to the questions put by the PRAVDA editors, Leonid Brezhnev again stressed the idea which had been consistently reiterated by the Soviet leadership over the past few years: "Finding ways to reduce the danger of war now and in the future for Europe, and consequently for the entire world, is what matters most, and this task cannot be tackled without achieving real shifts in the field of the limitation of the arms race."

This statement, made on the occasion of the fifth anniversary of the European Conference on Security and Cooperation, is taking on a special meaning in view of the forthcoming second conference to review the enforcement of the treaty on the non-proliferation of nuclear weapons. This is a very important problem which, on the one hand, directly affects the interests of world security and, on the other, is related to the extension of constructive international cooperation in using atomic energy for peaceful purposes.

The Soviet Union has always been attaching primary importance to the problem. Way back in 1965 it tabled at the 20th session of the UN General Assembly a draft treaty on the non-proliferation of nuclear weapons, and has been consistently working for its observance since the treaty was concluded in March 1970.

The practice of the past decade has forcefully demonstrated that the treaty prohibiting the states which possess nuclear weapons to pass them on to any party, and the non-nuclear states to produce or acquire them has become a major obstacle in the way of the spread of nuclear danger over the globe. At the same time it has proved its effectiveness in ensuring dependable control over the implementation by the parties to the treaty of their commitments without intervening in their internal affairs or creating obstacles to the use of atomic energy for the purposes of economic,

scientific and technical progress. At the same time the past decade has distinctly shown up the opponents of this approach to the complex problem and made clear their arguments against the treaty.

There seem to be those who would like to regard the extension of international trade in nuclear materials and know-how as a purely commercial matter. Meantime, it is hardly necessary to prove that this is, above all, a matter of politics and international security. Students of international relations--e.g., Prof T. Greenwood, a co-author of the book "Nuclear Proliferation" recently published in the US--say that any new arrival in the nuclear club is fraught with the emergence of local, regional or global instability. According to the US Brookings Institution, in 1980 the nuclear reactors functioning in 36 countries, excluding the US, can produce enough plutonium a year to enable the production of over 2,000 atomic bombs like the one dropped on Hiroshima. Hence the obvious conclusion that along with the spread of nuclear reactors, the problem of control over the use of plutonium amassed in different countries and limitation of the spread of know-how of nuclear weapons production is assuming ever greater importance and is likely to continue doing so in the future.

There are also those who consider the non-proliferation treaty an act of "discrimination" and the desire of certain great powers to perpetuate their "nuclear monopoly" and shut the door of the "nuclear club" in the face of other countries. But this attitude cannot be justified either. Anyway, as for the Soviet Union, it has never regarded the ban on the proliferation of nuclear weapons as an end in itself, but has always been working for effective measures to ensure universal nuclear disarmament.

The most ample complex of concrete initiatives on this score was advanced by the Soviet Union at the UN General Assembly's special session on disarmament, held in New York in May-June 1978, in the document "On Practical Ways to End the Arms Race." It proposed, in part, that following the example of the Soviet Union, the nuclear powers take upon themselves the obligation never to use nuclear weapons against the states which have refused from the production and acquisition of such weapons and do not have them on their territories. In the following period the Soviet Union made repeated statements of its readiness to conclude relevant agreements with any non-nuclear state. However, the most reliable guarantee of their security would be the signing of a corresponding international convention with the involvement of all nuclear powers.

These are the general outlines of the Soviet viewpoint on the most burning issue of the day.

We consider that the termination of the nuclear arms build-up, despite all the complexity of the problem, must and can be attained. The Soviet Union does not, of course, turn a blind eye to the fact that the opponents of disarmament have markedly intensified their efforts of late. There are

plenty of high-ranking politicians in the NATO countries and Peking campaigning for the build-up of the military potential quite openly. All this only adds up to the difficulties arising on the way of disarmament champions.

Anyhow, one should not ignore certain progress observed in some key areas of the struggle for curbing the arms race after the first conference to review the enforcement of the Nuclear Non-Proliferation Treaty: the introduction of a ban on Military or any other hostile use of environmental modification techniques; the current implementation of the confidence-building measures agreed upon by the Helsinki conference; the reached understanding on the limitation of strategic armaments; and on the main elements of an agreement on the prohibition of radiological weapons; the holding of the UN General Assembly's special session on disarmament; the on-going talks on a complete nuclear test ban as well as the prohibition of chemical weapons, which have made initial steps in preparing corresponding agreements.

All these gains and what is most important, mankind's vital concern for checking the arms race give every reason to hope that the forthcoming conference will make a weighty contribution to the efforts to remove a nuclear holocaust.

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LIMITED NUCLEAR WAR: SOVIET COMMENTARY

Moscow NOVOSTI DAILY REVIEW in English 14 Aug 80 pp 1-2

[Commentary by Gennady Gerasimov, APN political correspondent: "Chimera of Limited Nuclear War"]

[Text] The President's directive No. 59, supplemented by directives Nos. 53 and 58, presupposes for the United States the possibility of "waging a long but limited nuclear war." As distinct from the accepted interpretation of the concept "limited war" as an armed conflict confined to a separate geographical region and to the choice of weapons used, the directives deal with confining the aims to military and political targets.

Of itself the idea of a limited nuclear war of such a kind has for two decades been the subject of discussion by chair-borne strategists. In 1961, for example, the Centre for International Studies of Princeton University held a conference in Washington whose papers were published in a collection entitled "Limited strategic war." This was followed by other numerous attempts to lead out of the deadlock Western military-strategic thought so badly let down by history. Two factors effected the deadlock: the appearance of nuclear weapons which did not fit in with former general staff schemes, and the existence of a sufficient amount of this weapon on the other side.

In the new conditions it is not easy finding such military ways of solving political problems as would make it possible to avoid the fatal consequences of a nuclear conflict. But the search continues. This is prompted by the permanent interests of the military-industrial complex. This is also prompted by new weapons which once a reality demand a function, a place in military planning. Deliberations about the "Soviet threat" only cover up these real causes.

The concept of a limited nuclear war, especially a lengthy one, is highly speculative. Indeed, it envisages an exchange of a limited number of nuclear strikes on a limited number of targets, that is, it presupposes that the other side, too, accepts the "rules of conduct" proposed to it. This supposition is based on the shaky argument concerning the relative determination of the sides to heighten the degree of risk. It is considered

that the other side will limit the strength of its blows, since otherwise it would get a strike at a higher step of nuclear escalation.

Deliberations of this sort introduce in the military strategy psychological nuances which will hardly play the decisive role at the moment of engagement. It is naive to hope to muzzle a nuclear war. *A la guerre comme a la guerre.*

But even at the level of psychological deliberations it is possible to show the inevitability of the conflict escalating. Assume that the opponents have exchanged strikes. What then? "Victory after such an exchange of strikes," we read in the book mentioned before, "will belong to the side which will show more readiness to continue."

The inner logic of such a war inevitably leads to a general nuclear war. War, as Clausewitz, a master theoretician of last century, noted, has its "own grammar." The losing side will surely experience a temptation to lift the initial restrictions on the conduct of the war to get a change in its favour. The winning side will be tempted to lift the original restrictions to get more, since it is already winning the war. In other words, all this "new strategy" is just so much nuclear wishful thinking.

The intensification of the American nuclear potential, as envisaged by this strategy, together with measures to reinforce the defence of leadership centres, looks to the other side very provocative--as a return to dreams of a preventive or "preemptive" strike which would knock out the nuclear sword of retribution from the hands of the Soviet Union. The Soviet side has warned that it will not allow any upsetting of the military-strategic equilibrium achieved. The result will be a further spiral in the arms race.

Besides, the President's directive No. 59 is dangerous for its tendency to present a nuclear war as acceptable, especially if directives how to wage it are drawn up beforehand. This only increases the danger of the outbreak of such a war.

The imitating authors of the "new" American strategy repeat after their predecessors that it will enable the US President to avoid the "apocalyptic choice" between "wide-scale sudden war" and "capitulation." As we have seen, a limited war inevitably, in keeping with its "grammar," on the steps of escalation and jumping over them, leads to Apocalypse.

Incidentally, the very raising of the problem of choice is false. No one requests America to "capitulate," and both aspects of the choice can be avoided if the latest Soviet nuclear disarmament proposals are heeded.

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